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Factors associated with adequacy of money incomes of disadvantaged families in Iowa

Shu Yuang Huang
Iowa State University

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FACTORS ASSOCIATED WITH ADEQUACY OF MONEY INCOMES

OF DISADVANTAGED FAMILIES IN IOWA

by

Shu Yuang Huang

A Thesis Submitted to the

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INTRODUCTION

During the early months of 1967, interviews were conducted with
nearly 900 rural and urban households in Iowa to obtain data with which
to answer several questions related to policies for financing welfare
programs in the state. Of particular concern were public and private
programs which provide income rehabilitation and maintenance assistance
for individuals who need it (Pounds, Lindgren and Baker, 1967, p. 8).
During 1967 and 1968, the findings were used for design and conduct of
a state-wide program of education by the Cooperative Extension Service
at Iowa State University on "Dimensions of Welfare." Another of the
several possible uses of data from the 1967 survey is demonstrated in
the present study of "Factors Associated with Adequacy of Money Incomes
of Disadvantaged Families in Iowa."

The present study was undertaken for two general purposes. The first
of these was to determine the extents to which there were gaps between
money incomes reported for 1966 and the money incomes needed by these
households as estimated by a technique reported by the Social Security
Administration of the United States. The second objective was to
identify the tendencies of selected characteristics of the Iowa household
economic units to be associated with their levels of income adequacy.

It was anticipated that accomplishment of the two objectives would
provide much useful information concerning the extent of and circum-
stances associated with tendencies of farm, rural nonfarm, and urban
households to have relatively insufficient money incomes. With such in-

formation, target audiences could be more readily identified for which particular educational programs of various kinds could be developed and conducted on and off the university campus. Mass media such as radio, television and the press could do much to create awareness of the special circumstances of living of the financially disadvantaged in Iowa and to arouse concern for improvement of public and private programs for remedy and prevention of economic poverty. With respect to research, the findings of the present study should throw some light on problems involved in the appraisal of techniques for measuring income adequacy of household units. In addition, welfare problems in need of further investigation might be revealed.

BACKGROUND FOR THE STUDY

Development of the overall structure and specific hypotheses of the study were based on several types of concerns related to measures of adequacy of money incomes of household economic units. These concerns, represented by the following questions, are considered briefly in the present section of this thesis report.

How may money income be viewed as one of several components of the various resource mixes used by an economic unit as it strives to achieve its standard of living?

Why is measurement of income adequacy essential for establishing policies and conducting programs related to achievement of minimum levels of well being for all household economic units?

What procedures have been proposed or used for measurement of minimum money income levels of household economic units?

Assuming that minimum money income requirements can be estimated satisfactorily, what characteristics of the household economic units tend to be associated with the extent of income adequacy?

The descriptive and analytical structures of the study were based on several aspects of the foregoing questions.

Money Income as a Component of the Household Resource Mix

The present study was focused on money incomes needed by household economic units of given size, composition and residential location. However, money income is only one of the several types of resources which

a household may use to achieve, maintain, or even increase, the level of living it desires. If the study of money income is to be made in realistic context, its relation to several other types of resources should be pointed out. This is the objective of the present section of this report.

The money income of a family or other household economic unit may be defined as its total inflow of money receipts from all sources during a specified period of time. Similarly, household expenditures represent the outflow of money resources in exchange for goods, services, or contractual rights in property or services.

Money is only one of several resources which comprise a mix needed by households to achieve their levels of consumption and living. Liston (1966) has proposed that household resources may be classified by seven categories, namely: money, property (assets), human attributes (sometimes considered human capital), community opportunities, space, time, and various aspects of the natural environment. Various amounts and mixes of these resources are needed by individuals and by household groups to obtain any given good or service desired. These mixes of resources comprise the inputs invested in order to achieve the particular output desired. The quantities and qualities of each type of resource available to the consuming unit will influence the number of possible alternative inputs and outputs and the number of choices to be made.

The concept of resource mix, and the strategic relevance of each kind and amount of resource in the mix, was alluded to by Joseph S. Davis

(1945, p. 9) in his presidential address prepared for the American Economic Association in February 1945. In this interpretation of "Standards and Content of Living", Davis said:

> The character of the content of living, like that of consumption, depends upon its composition or structure, in particular upon the degree of harmony or balance among its components. Within limits, one element may be accepted in substitution for another: heavier consumption may offset less desirable working conditions, consumption may be sacrificed for freedom, larger savings may offset consumption restrictions, and so on. Beyond certain limits, however, further restrictions of consumption, possessions, or freedoms is reckoned intolerable, no matter how ample other elements in the complex may be.

> Improvement in the content of living can often be brought about more easily and more substantially by limited changes in its structure than by increase in the consumption level as a whole. As in Liebig's law of the minimum and its variants in science and economics, a favorable change in some highly deficient component may so improve the whole content that reductions in some others will cause no injury. Here is a valuable hint toward the technique of improving the living planes of depressed groups or peoples whose productive or earning power is low.

> A well-balanced simple plane of living may be definitely superior to an ill-balanced elaborate plane, just as a cheap, balanced diet is more nutritious, and perhaps even more satisfying, than an expensive, ill-balanced one....

Although money, by itself, is of little use in achieving levels of consumption desired by an individual or household unit, a certain amount of it is essential in the market economies of the Western World. The question is, "Under what circumstances is a given amount of money to be specified as the probable 'minimum essential'?" Further, dependability and regularity of the inflow of money income are important considerations, along with its amount. The present study has not dealt with income dependability and regularity.

Although all types of resources are relevant when policies are being set concerning ways of appraising income adequacies of households, several of them cannot be given attention because numerous difficulties of measurement and also of making empirical estimates, have not been overcome. However, the task of finding ways of estimating minimum and moderate levels of money income, under particular household and community circumstances, is a challenging one in and of itself.

Forty years ago, Dr. Faith Williams (1930, 483-484), an economist in the Bureau of Home Economics of the United States Department of Agriculture, proposed a formula for calculating an estimate of the money value of family living which was much more comprehensive than a measure of money expenditures per se. At that time she said,

> The economic organization of the life of most American families has become increasingly complicated in the period since 1900. A remarkable development of expensive pieces of equipment in which the family may invest, has been accompanied by a great increase in the number of opportunities available for women to engage in "gainful pursuits" outside their homes.
>
> The result is that figures on annual family expenditure, presented by themselves and not supplemented by figures on the time expenditures in housework and on household equipment, have become increasingly unsatisfactory for understanding the scale at which different groups of families each having purchased goods and services of $3,500 during one year, may be quite worthless, even though the number of persons in the two families, their age and their sex, be exactly alike, unless the expenditure figures are supplemented with other data.
>
> ... in consideration of such problems with students of family economic organization a few years ago, the conclusion was reached that it would be helpful if a more extended study of family economics could be undertaken. The following equation, which could be called "the equation of total money value of family living," gives a convenient statement of the different elements in the situation.

MV = ME + VP + VL + D + I, in which
    MV stands for the money value of family living,
    ME for money expenditures for goods and services con-
      sumed within the year
    VP for the value of product consumed without money
      expenditures
    VL for the value of the unpaid labor utilized by the
      family, in the household
     D for depreciation on all durable consumers' goods,
      owned by the family
     I for interest on the family investment in durable con-
      sumers' goods.

Even though Williams made this proposal four decades ago, it seems that little progress has been made, either among professionals, public officials, business men, or the consuming public, toward recognition of the inappropriateness of considering inflow of money income during a specified period of time as an adequate indicant of the actual or potential levels of consumption of the household unit.

In 1953, Kyrk (1953, pp. 39-40) wrote:

So important today is income in money in enabling people to live as they desire that the term "income" is often used to mean money income alone. Actually income as a measure of economic welfare includes rights to consumption goods and services other than those represented by the money income during the period in question. Total income or power to consume is greater than that given by money income alone. Ownership of assets as houses, furniture, equipment, and automobiles gives the owner the right to their services without rental payment. From the unpaid productive efforts of family members come commodities and services that expand consumption possibilities. The state or other organized group may provide "free" services and facilities. Differences from time to time and from group to group in the relative importance of such sources of income will obviously lessen the exactness of comparisons of relative economic well-being based upon money income alone.

According to this statement by Kyrk, the income of a household economic unit would consist of both money and non-money receipts. The former would include inflow during a specific period of time from earnings from paid

employment of all members who are considered part of the economic unit:

(profits from business enterprise); rents, royalties, interest, and

dividends from investments; transfer payments; gifts and other mis-

cellaneous sources. Non-money income, or inflow of goods and services

during a period of time from sources other than money, would include

estimated use-value of occupancy of owned dwelling and of other durable

goods owned, unpaid services of family members (household i.e., or con-

sumer production), and goods or services received as gifts or from the

natural environment. The patterns of income from money and nonmoney

sources differ widely within given households from time to time and among

households from place to place at a given time. Therefore, the levels

of household consumption cannot be predicted alone in terms of the money

income available.

From the household point of view, money income should be distin-

guished from real income which may be defined as the total inflow (re-

ceipts), during a specified period of time, of goods and services from

all sources. Further, this concept of real income is different from the

economic interpretation of real income or real wages when viewed as the

purchasing power of money income received. Both interpretations of real

income are acceptable for their respective purposes.

From a human welfare point of view, real income is a means to an

end rather than an end in and of itself. It is one of the important re-

sources essential for achieving human growth, development, and general

well being. But, to achieve these humanistic goals of well-being, more

than real income is required. A clue to identification of these missing

elements is given by Buchanan and Ellis (1955, p. 23) in their discussion

of "The Determinants of Real Income: Resources and Their Productivity

in Underdeveloped Areas."

> The flow of output, and hence average real incomes, in any
> society, depends upon the productive resources available to it;
> how effectively these are used; and the cultural, social and
> political framework within which all economic activity in the
> particular society is carried on. These three factors broadly
> determine the level of total output and thus per capita incomes
> at any point in time. Similarly, efforts to raise real incomes
> in any area can be classified initially according to whether
> they attempt to augment the productive resources available, to
> improve the efficiency with which resources are used, or, lastly,
> to modify the socio-cultural environment in ways that either
> increase the available productive resources or enlarge the out-
> put they yield.

Although this statement referred to situations in underdeveloped coun-

tries, the concepts are applicable to households as well. That is, house-

hold economics may be considered as relatively underdeveloped, develop-

ing, or at near-optimum levels of developmental potential. Factors which

influence their state of development will include not only real household

income, of which inflow of money income will be only a part, but also

the extent of productivity of resources available (i.e., management),

and the conditions of the household's external environment which help

and those which hinder its progress in resource procurement and manage-

ment.

Measurement of Minimum Money Income Requirements

If a nation has a policy that no household of specified character-

istics should be expected to live on a money income below a reasonable

minimum, the question of "What is an adequate income for the given situation?" arises. That is, "How may one identify the 'poor' or 'marginal poor'?" In a recent article, Orshansky (1969, p. 37) has said,

> Counting the poor is an exercise in the art of the possible. For deciding who is poor, prayers are more relevant than calculation because poverty, like beauty, lies in the eye of the beholder. Poverty is a value judgment; it is not something one can verify or demonstrate, except by inference and suggestion, even with a measure of error. To say who is poor is to use all sorts of value judgments. The concept has to be limited by the purpose which is to be served by the definition. There is no particular reason to count the poor unless you are going to do something about them. Whatever the possibilities for socioeconomic research in general, when it comes to defining poverty, you can only be more subjective or less so. You cannot be nonsubjective.

Thus, poverty tends to be subjective rather than objective and relative rather than absolute. An example is President Roosevelt's well-known statement, "I see before me one-third of a Nation ill-clothed, ill-housed, and ill-fed." Even at that time and in that environment of deep depression in the United States the people as a whole were relatively much better off than the greater proportion of populations within numerous other countries of the world.

A rough way of delineating relative poverty with respect to money income is to examine the income distribution among households in a given area, be it national, state or local. For example, from the Current Population Reports (1969, p. 28, p. 51) Table 1 has been adapted. According to this information 12.5 per cent of families in the United States and 11 per cent of families in the north central region had money incomes under $3,000. A higher percentage, 26.9 per cent, of farm

families had incomes below $3,000, whereas in areas of 1,000,000 or
more, 6.2 per cent of families living outside central cities had incomes
this low.

Similarly, at local levels of Boone and Des Moines, Iowa, random
samples of households with wife under forty years of age and husband
present, reported total family incomes for 1966 (Des Moines) and 1967
(Boone), Table 2. Considering the reports of all respondents, one-half
of the households in Boone and more than one-fourth in Des Moines had
money incomes under $7,000. In both cities the cooperating families
were identified at general socioeconomic levels by use of four indicants,

Table 1. Distribution of families by total money income in 1967 for
the United States and for the North Central Region[a]

Income level	U.S.	North Central	Farm	Nonfarm	Metropolitan			
					1 million or more		under one million	
					In central cities	Outside central cities	In central cities	Outside central cities
(In percentages)								
Under $3000	12.5	11.0	26.9	11.6	12.1	6.2	12.1	8.8
Under $7000	41.4	38.2	66.1	39.8	42.0	24.7	43.3	34.7
$7000-$8999	17.2	18.4	12.2	17.5	16.4	17.0	17.4	19.2
$9000-$11,999	18.9	20.8	10.4	19.4	17.3	22.6	18.3	22.2
$12,000 and over	22.6	22.6	11.3	23.2	24.2	35.7	21.0	23.8

[a]Source: U.S. Department of Commerce (1969, pp. 28, 51).

Table 2. Money income distributions of young families in Boone and Des Moines, Iowa (Spring 1966)[a], by socioeconomic level[b]

| Total money income level | Socioeconomic level | | | | | | | |
| | Lower | | Middle | | Higher | | Total | |
	N	%	N	%	N	%	N	%
Boone:								
Less than $7,000	46	90.2	44	53.6	6	10.3	96	50.2
$7,000 - $8,999	4	7.8	26	31.7	21	36.2	51	26.7
$9,000 - $11,999	1	2.0	8	9.8	12	20.7	21	11.0
$12,000 and over	0	0.0	4	4.9	19	32.8	23	12.1
Total	51	100.0	82	100.0	58	100.0	191	100.0
Des Moines:								
Less than $7,000	66	56.9	28	28.0	4	3.5	98	29.8
$7,000 - $8,999	30	25.8	38	38.0	26	23.2	94	28.7
$9,000 - $11,999	19	16.4	30	30.0	35	31.3	84	25.6
$12,000 and over	1	0.9	4	4.0	47	42.0	52	15.9
Total	116	100.0	100	100.0	112	100.0	328	100.0

[a]Wives in the families were under 40 years of age.

[b]Socioeconomic level was determined by relative scores based on husband's type of occupation, husband's educational level, annual money income level, and a score of general conditions of housing occupied.

namely: annual money income, type of occupation of husband, his educational level, and an interviewer's estimate of the general condition of the housing occupied and the neighborhood surroundings. For Boone, 51 or approximately one-fourth of the families were classified as of relatively lower socioeconomic level, of whom 90.2 per cent had incomes under $7,000. In Des Moines, 116 or about one-third were classed in the lower socioeconomic level, of whom 56.9 per cent reported money incomes under $7,000. Caution should be used in comparing percentages for the two cities because the distributions of households among the three socioeconomic levels are not equivalent. However, within each area, one would be led to assume that those with low money incomes, and also identified by other criteria as comparatively "low", might be considered as in or near a state of relative poverty.

The extent of subjectivity involved in identification of poverty will vary widely. In reporting his study of "Life, Labour and Poverty" in London, Zweig (1948, p. 96) said,

> It is easier to speak about poverty than to define it. Any definition . . . must be evaluative, i.e., based on a value judgment although not necessarily arbitrary and subjective . . . . We have at least . . . three different standards for denoting poverty, one based on the judgment of society, the second on the judgment of the individual, and the third on the impersonal judgment of science.

He also accents the importance of "felt poverty" because existing circumstances of living fall far short of personal standards of what constitutes a reasonable level of living for oneself or one's family. By this interpretation, a suburban family of median income level may feel impoverished

and disadvantaged if it does not have a second car or a house with two or more bathrooms while individuals and families in the inner city may feel "comparatively well off" if they have no car but adequate public transportation and no private bathroom but sufficient facilities which are shared with others in the building. As Orshansky (1969) has said, poverty is in the eye of the beholder.

The least subjective but currently impractical approach to definition of poverty would be a counterpart of procedures now being used in certain studies of health and nutrition. This approach might be called the "end-product" criterion; that is, poor nutrition or poor socioeconomic status may be identified in terms of what is necessary to produce a "healthy" or satisfactory product as measured by various objective criteria. If satisfactory measures of human well-being could be developed for mental, emotional, economic and social health as well as for the physical element of "well-being", then the conditions which contribute to minimum satisfactory levels of these respective aspects of human life could be identified and persons and groups which did not manifest the necessary conditions could be considered impoverished.

In between this subjective-objective continuum are several empirical approaches which, though none of them is completely satisfactory, do represent present possibilities for estimating one or more characteristics of the population which comprise the state of relative "poverty". The measures which will be most appropriate for a given purpose will depend

on the nature of that purpose. For example, the Bureau of the Census

(U.S. Current Population Reports, Series P-23, No. 19) has determined

"poverty areas" in standard metropolitan statistical areas (SMSA's) of

250,000 or more population according to the relative presence of the

following five socioeconomic characteristics:

1. Per cent of families with money incomes under $3,000 in 1959.

2. Per cent of children under 18 years old not living with both
    parents.

3. Per cent of persons 25 years old and over with less than 8
    years of school completed.

4. Per cent of unskilled males (laborers and service workers) in
    the employed civilian labor forces.

5. Per cent of housing units dilapidated or lacking some or all
    plumbing facilities.

Census tracts in the lowest quartile of the rankings were designed as

relatively "poor" when plotted on Census tract maps. Thus, the purpose

was geographical location of concentrations of individuals and groups

who were in the lowest one-fourth of the range of the five characteris-

tics considered. Further, the assumption of this procedure is that census

tract data are available and that they were reasonable to use as indicants

of poverty.

Two additional approaches deserve attention, each of which can be

illustrated by two or more different procedures. These general approaches

involve estimates of minimum levels of (a) money income or (b) money

income plus asset holdings which are presumed to be required for health

and minimal well-being. Any economic unit which falls below the minimum specifications would be considered as impoverished.

Of the various procedures which have been used to estimate minimum levels of money income, only three are noted here. These are the ones used by (a) the President's Council of Economic Advisors, (b) the City Worker's Standard Budget of 1967, and (c) the Social Security Administration formula as interpreted primarily by Mollie Orshansky.

According to Orshansky (1969, p. 37), early in the 1960's the President's Council of Economic Advisers specified a standard that,

> ...any family of two or more with less than $3,000 annual income, and single person living alone with less than $1,500, would be considered poor for purposes of anti-poverty program planning -- but not for program eligibility. This original standard led to the odd result that an elderly couple with $2,900 income for the year would be considered poor, but a family with a husband, a wife, and four little children with $3,100 would not be.

Thus, although this procedure was the best that could be developed with the information available at the time, it has many faults which motivated the Social Security Administration to try to develop better criteria and measures.

Extensive efforts have been made by the Social Security Administration (SSA) of the United States Department of Health, Education and Welfare to find reasonable procedures for identifying the relatively poor among various segments of the nation's population. The present study has been based on an adaptation of one of the proposed procedures. One of Orshansky's (1969, p. 38) statements concerning the SSA efforts is as follows:

We have developed two poverty thresholds, corresponding to what we call the "poor" and the "near-poor." These thresholds are set separately for 124 different kinds of families, based on the sex of the head, the number of children under 18, the number of adults, and whether or not the household lives on a farm. The threshold is defined as an attempt to "specify the minimum money income that could support an average family of given composition at the lowest level consistent with the standards of living prevailing in this country. It is based on the amount needed by families of different size and type to purchase a nutritionally adequate diet on the assumption that no more than a third of the family income is used for food. The two threshholds were developed from food consumption surveys conducted by the Department of Agriculture in 1948 and 1955. These revealed that the average expenditure for food by all families was about one-third of the income.

An assumption was made that the poor would have the same flexibility in allocating income as the rest of the population but that, obviously, their margin for choice would be less. The amount allocated to food from the average expenditure was cut to the minimum that the Agriculture Department said could still provide American families with an adequate diet. We used the low cost plan to characterize the near poor and for the poor an even lower one, the economy food plan, which postulated 70 cents a person for food each day, assuming that all foods would be prepared at home. The Agriculture Department estimated that only about 10 per cent of persons spending that amount or less actually were able to get a nutritionally adequate dite.

Our research revealed that in 1966, on the average, a nonfarm family of four would require an income of about $65 a week to meet the poverty threshold; for the near-poor level, it would take about $20 more. It is important to remember that these income criteria are derived solely from the estimated cost of the minimum diet and its presumed relationship to other daily necessities. We made only two decisions -- how much we would allow for food in the low cost plan and the economy plan, and what would be the relationship of food to other income. The index is arbitrary in that it relies only on income as the criterion of poverty, but income statistics happen to be the only ones currently available on a regular basis. If we want to be able to apply our standard to see how many and what kinds of families fall below it, we have no choice but to base it on whatever statistics are available.

Applications of the foregoing procedure to various segments of the nation's population are reported in a recent article in the Social Security Bulletin by Orshansky (1968, p. 11). For example, Table 3 has been adapted from

Table 3. Incidence of poverty in 1966: number and percent of families
with income below the SSA poverty level, by sex and race of
head and other specified characteristics (number in thousands)

| Characteristic | Total | Poor | | |
		Number	Percent	Percentage distribution
Total	48,922	6,086	12.4	100.0
Residence:				
Nonfarm	46,225	5,598	12.1	92.0
Farm	2,697	488	18.1	8.0
Race:				
White	44,017	4,375	9.9	71.9
Nonwhite	4,905	1,711	34.9	28.1
Age of head:				
14-24	3,011	510	16.9	8.4
25-34	9,560	1,139	11.9	18.7
35-44	11,113	1,180	10.6	19.4
45-54	10,620	919	8.7	15.1
55-64	7,689	800	10.4	13.1
65 and over	6,929	1,538	22.2	25.3
No. persons in family:				
2	16,354	2,271	13.9	37.3
3	10,098	889	8.8	14.6
4	9,400	793	8.4	13.0
5	6,189	649	10.5	10.7
6	3,438	501	14.6	8.2
7 or more	3,443	984	28.6	16.2
Region:				
Northeast	12,039	1,037	8.6	17.0
North Central	13,617	1,259	9.2	20.7
South	14,978	2,950	19.7	48.5
West	8,288	840	10.1	13.8

that report. According to the information in Table 3, 34.9 per cent of nonwhite families were classified as poor by SSA rule. Families of seven or more persons and age of head of families were 65 and over also tended to have a higher percentage of income below SSA poverty level.

A budgetary approach has been used by the United States Department of Labor, based on a procedure originated in 1947 and identified as "The City Worker's Family Budget" (U.S. Department of Labor, 1948).

For more than two decades various explorations, extensions and evaluations have been made of this approach which is based on the out-of-pocket costs for a budget of quantities and qualities of goods and services estimated to be needed by the average blue collar worker, employed full time, whose wife is a full-time homemaker, and with two children (boy 13 and girl 8 years old). This budgetary list of goods and services was priced in several cities of the United States in 1947 to ascertain the comparative costs of living for a family of the specified characteristics but living in the respective cities.

In 1960 an "Interim City Worker's Family Budget" was announced which was estimated from information available from various sources. Then recently, late in 1967, "A New City Worker's Family Budget" was reported (Groom, 1967, pp. 1-8). A more detailed report, "Three Standards of Living for an Urban Family of Four Persons, Spring 1967" was released early in 1969 by the Bureau of Labor Statistics. These budgets differ from the previous ones in that they have been developed for "low", "moderate" and "higher" standards of living, and have been priced in a

larger number of cities. Cedar Rapids, Iowa, was one of the cities in
which pricing of the budgets was made. For that city it was found that
the costs of the budget at the three levels were $6,223 for low, $9,358
for moderate, and $13,307 for the comparatively high. The percentages
of these three budgetary levels represented by food were 26.1, 21.8 and
19.0, respectively (U.S. Department of Labor, 1969, p. 18). Thus, Cedar
Rapids families of four with characteristics comparable to those used
for budget study and with income under $6,000 might reasonably be con-
sidered in a relative state of poverty or near poverty.

Factors Associated with Money Income Requirements

Four types of factors were considered as general conditions which
might be associated with the extent to which actual money incomes of the
families in the present study differed from money incomes estimated as
needed. These hypothesized factors were: (1) selected demographic char-
acteristics of the household; (2) residential characteristics; (3) economic
attributes of the household; and (4) selected social orientations of the
respondents. Some of the elements considered in relation to these four
factors are given attention next in this report.

With respect to type of residential area, the gaps between actual
and estimated annual money income could be expected to differ for a number
of reasons. Although the out-of-pocket expenses for living of farm
families might tend to be lower than for nonfarm economic units, this
difference could often be offset by larger numbers of persons per household.
Similarly, the average size of household tends to decline with increase

in degree of urbanization; other things being equal, this could result in higher per capita money income. However, price levels of consumer goods and services may also increase, resulting in decreased purchasing power of the consumer dollar. This may be a more powerful factor as the degree of urbanization increases and may offset the comparative gain because of relatively lower household size. Offsetting circumstances such as these led to a decision by the investigator to focus primarily on factors associated with the income gaps of households within each of the three residential types (i.e., rural farm, rural nonfarm, and urban). However, tests were made to identify statistically significant differences between sizes of urban areas with respect to factors associated with household tendencies to have inadequate incomes.

Two additional aspects of residential characteristics were considered in the present study. One was that of residential tenure; that is, "Were the households living in dwellings which they rented, owned in part or in full, or obtained by other arrangements?" The equity which owner households may have in their dwellings might give them greater breadth of choice than renters with respect to procurement and use of household resources and, thus, their tendencies to be below some designated poverty line should tend to diminish.

With respect to residential mobility from place to place, it seemed reasonable to expect that the tendency to be poor would be associated positively with proneness toward changing place of residence. Evictions because of inability to pay rent, moves made in order to obtain employment,

and other circumstances, would seem to be more frequent among the lower than the higher income group.

Differences in demographic and economic circumstances of households in the three types of residential area indicated that households in rural farm, rural nonfarm, and urban areas might differ considerably. Although the absolute number of household units with inadequate incomes was expected to increase with degree of urbanization, the proportions with income deficiencies within the residential zones were expected to be largest for farm households and smallest for those in urban areas.

Five demographic characteristics of the households were projected as probable factors to be associated with gaps between actual annual incomes reported in 1966 and those estimated by the present investigator as having been needed by the 848 households studied. These factors were size of household, number of children, age and sex of head, marital status, and general conditions of health.

Relatively greater poverty seems always to be found when population size is out of proportion to the space and other resources available. For the less developed countries, the population explosion is one of the most difficult problems in anti-poverty policy. This concept applies also to households. For a given household income, the greater the number of persons to be supported, the smaller the per capita income. Although it is not true that large families comprise the majority of the economically poor, at least it is known that larger household economic units need more income to maintain a minimum level of consumption, especially when the children are of teen age.

Some age groups have fewer job opportunities and, as a result, often have smaller incomes. Further, such persons as physically and/or mentally handicapped adults, as well as most children and the aged, are not capable of full or part-time employment. Information reported in Table 4 reveals that, in 1959, among persons living below the poverty level as identified by the Social Security Administration (Newman, 1969, p. 33), 15 per cent were persons aged 65 years of age or over, and 43 per cent were children under 18 years of age.

It is the custom in most cultures that males should be the main bread-winners. In the United States this is coming to be less often true. Yet, it cannot be denied that the average earnings of males will usually be greater than that of females. This does not mean that the earning abilities of females is less than of males. Because of family responsibilities, females often are less regular in their work. During a certain part of the life cycle, they usually have to devote their primary attention to the bearing and rearing of children. Households having women as their heads are much more likely to have incomes considerably lower than when a male is the head.

In Table 4, data are reported concerning types of persons living below the poverty level as defined by the Social Security Administration. More than one third (36%) of all persons in households with female heads were living under the poverty level. Many of these were females of 65 years and over since, for families with children under 18 years of age, 15 per cent had a female head and 27 per cent were headed by a male. Thus, both

Table 4. Incidence of poverty in the total population and the distribution of the poor[a]

Characteristics	Incidence of poverty, 1966 (per cent poor in each group)	Distribution of persons living below the poverty level			
		1959		1966	
		Number (millions)	Per cent	Number (millions)	Per cent
Total	15	39	100	30	100
Age and family head:					
Persons 65 years and over	30	6	15	5	17
Children under 18	18	17	43	13	42
In families with male head	13	13	33	8	27
In families with female head	61	4	10	5	15
All persons in households with female head	42	11	27	11	36

[a]Source: Newman, Dorothy K. 1969. Changing attitudes about the poor. Monthly Labor Review 92:33.

age and marital status tend to be associated with inclinations toward poverty.

Generally speaking, poor health will affect the economic situation of a household, either from the point of view of earning power or of medical expenses, or both. Persons who have ill health or related handicaps (mental or social as well as physical) have difficulties in obtaining employment and of keeping the jobs they do get. They are also more likely to have unusually high expenses in relation to their illnesses and disabilities. Thus, less of the available income is left for purchasing goods and services essential for everyday living.

When dealing with poverty, attention is often focused on the educationally underprivileged, the aged, the under- and unemployed. Lack of education is a handicap to obtain a better job or to prevent from being unemployed. Hence to be well educated is a means of obtaining incomes essential for the basic physical needs and other human requirements. It was expected that some of the occupations, such as professional and skilled workers have a greater reward than the others. With respect to extent of employment, the steady workers were expected to have the higher incomes. Similarly, households which were relatively satisfied with their standards of living and who own a car or truck would seem most likely to be those with the positive income gaps.

Liston (1964, p. 14) has said "Each person's philosophy is a complex image of his own requirements." Poverty is the gap between what is and what ought to be. If the requirements or standards were different, the degree of poverty would not be the same for a given money income. Due to socialization processes by which standards of living are developed, households tend to expect to have levels of material well-being similar to the society in which they live and to those of the persons or groups with which they choose to identify. Thus, when standards of living seem low compared with those of relatives, immediate neighbors and social friends, the negative income gap would probably be most prevalent.

Hypothesis of the Study

According to the objectives stated in the introduction the general hypothesis proposed for the study was that there was no association of the

extent of income gap with selected characteristics of the households in the study. The following empirical hypotheses were developed:

1. The extent of income gap of the households were not associated with residential characteristics:

   a. Zone

   b. Residential tenure

   c. Frequency of moving

2. The extent of income gap of the households were not associated with household composition factors:

   a. Number of children in the household

   b. Age of head

   c. Sex of head

   d. Marital status

   e. Health condition

3. The extent of income gap of the households were not associated with economic attributes of the household:

   a. Education of head

   b. Occupational type

   c. Head of house out of work for more than 15 days

   d. Condition of dwelling

   e. Own a car or truck

4. The extent of income gaps of the households were not associated with social orientation factors:

   a. Measure of being disadvantaged by level of education

   b. Measure of being disadvantaged by welfare status

c. Anomie score

d. Standard of living compared with relatives and old friends

e. Standard of living compared with immediate neighbors

f. Standard of living compared with social friends

g. Organization attended by head

PROCEDURE

Ideally, data for the present study would have been obtained by the investigator herself. However, limitations of time, money and personal experience made it unreasonable to develop a special interview instrument for the study and to use it in obtaining the information needed from a sample of adequate size. Since much of the needed information was available from the Human Resources Study (1967) previously mentioned, it seemed better to accept some inadequacies in kinds of information in order to have a larger number of households in the sample. In this section a brief description will be given of this previous source of data, of selected characteristics of the households interviewed, of the procedures used in computing estimates of minimum incomes needed and the relative levels of the income gap, and of techniques used in processing and analysis.

Source of Data

For the Human Resources Study (Pounds, 1967) interviews had been completed during the winter of 1967 with approximately 900 households. The aim was to obtain about 600 disadvantaged and about 300 nondisadvantaged households. A screening procedure was used (Form D of the Appendix in the Human Resources study) to eliminate households in which the head was over 60 years of age when the household could be identified as "disadvantaged" by the following criteria:

1. If the age of the household head was less than 30 years and he had completed less than 12th grade in school.

2. If the age of the household head was between 30 and 60 and he had completed less than 8th grade in school.

3. If the head of the household was unemployed more than 15 days in the previous three-month period.

4. If the household contained any children between the ages of 6 to 18 and who were not in school (who had not graduate from high school).

5. If all the money income from all sources was below a certain figure, considering the number of people in the household and whether it was a one-parent or two-parent household. This income index was as follows:

Number of persons in unit	Head married, spouse present	"One-parent" unit
1		$1500
2	$2500	3500
3	3000	4000
4 or more	Increase amount $500 for each additional person	

The sample had been drawn by the Survey Unit of the Iowa State University Statistical Laboratory. In the urban areas the sample was drawn only from those sections where higher proportions of disadvantaged households were expected. A cluster sampling technique was used to select segments within which eligible households would be interviewed. Within each segment all household economic units which fulfilled the previously-established definition of "disadvantaged" were interviewed along with a subsample of the "non-disadvantaged." The records were obtained from all counties of the state and represented types of population zones as follows: 239 from open country (farm and nonfarm); 143 from rural town; 127 from urban places of 2,500 to 9,999; 114 from urban

places of 10,000 to 49,999; and 252 from urban places of 50,000 or larger.
A total of 875 usable records were obtained, only 848 of which were used
for the present study because information for 1966 money income was not
obtained from 27 households. Data used for the present study represented
164 rural farm households, 214 rural nonfarm units, and 470 urban house-
holds.

An interview instrument including 75 questions was designed to ob-
tain the desired information and was organized in five sections which re-
lated to: (1) characteristics of the household economic units; (2) De-
tailed personal and occupational data; (3) background, opinions and per-
sonal characteristics; (4) standard of living and social participation;
and (5) resources related to public and private welfare.

From the information available, the following kinds of data were used:

1. Size of economic unit
2. Residential area
3. Actual number of children under 18 in economic unit
4. Age of head of economic unit
5. Education of head of economic unit
6. Did head of economic unit have more than 15 days not worked?
7. Condition of dwelling
8. Residential zone
9. Sex of head
10. Marital status
11. Occupational type
12. Farm tenure
13. Residential tenure
14. Does health or physical condition, other than temporary illness, re-
    strict the activity of any household member?
15. Is economic unit disadvantaged by one of Human Resources Study rules?
16. Is economic unit disadvantaged by education?
17. Standard of living compared with relatives and old family friends
18. Standard of living compared with immediate neighbors
19. Standard of living compared with social friends and acquaintances
20. Does the head of the household own a car or a truck?
21. Different organizations attended by head.
22. Welfare status

23. Anomie score
24. Different places lived since 1956
25. Minimum income level for this economic unit
26. Actual 1966 money income.

Selected Characteristics of the Samples

The data available from the Human Resources Survey concerning numerous

characteristics of the economic units were examined to obtain background

for interpreting the basic content of the present study. From the detail

of these characteristics, reported in Table 5, several descriptive

generalizations were made. Special attention was given to apparent dif-

ferences among the characteristics of the farm, rural nonfarm and urban

economic units.

The numbers of persons in the 875 economic units interviewed ranged

from one to 15. In all three of the residential areas more than half of

the households had four or fewer members (55.7% for farm, 63.1% for rural

nonfarm, and 72.0% for urban). These percentages indicated that the size

of household tended to be smaller as the degree of urbanization increased.

Similarly, the proportions of economic units with seven or more members

declined slightly with increase in urbanization (13.0% for farm, 10.9%

for rural nonfarm, and 9.4% for urban).

All except one of the economic units on farms had a male head.

However, in the rural nonfarm and urban units, about one-fourth had fe-

male heads. In the farm households, 94.7 per cent of the heads were

married persons. In the rural nonfarm sample, households without married

couples present were more often headed by widows (14.3% in contrast

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Table 5. Selected characteristics of the sample used in the Human Resources and the present study

Selected characteristics	Farm N	Farm %	Rural nonfarm N	Rural nonfarm %	Urban N	Urban %
Size of economic unit						
1 person	8	4.7	39	17.8	75	15.4
2 persons	40	23.5	45	20.6	132	27.1
3 persons	20	11.7	28	12.8	66	13.5
4 persons	27	15.9	26	11.9	78	16.0
5 persons	34	20.0	35	16.0	58	11.9
6 persons	19	11.2	21	9.6	32	6.6
7 persons	12	7.1	13	5.9	18	3.7
8 persons	6	3.5	7	3.2	10	2.0
9 or more persons	4	2.4	4	1.8	18	3.7
Total	170	100.0	218	100.0	487	100.0
Sex of head:						
Male	169	99.4	172	79.6	353	72.8
Female	1	0.6	44	20.4	132	27.2
Total	170	100.0	216	100.0	485	100.0
Marital status of head:						
Divorced or separated	1	0.6	11	5.1	75	15.4
Single	6	3.5	17	7.8	43	8.8
Widowed	2	1.2	31	14.3	50	10.3
Married	161	94.7	158	72.8	318	65.4
Total	170	100.0	217	100.0	486	100.0
Education of head:						
Less than 8th grade	22	12.9	27	12.4	41	8.4
Completed 8th but not 12th grade	79	46.5	88	40.4	238	48.9
Completed 12 grades	69	40.6	103	47.2	208	42.7
Total	170	100.0	218	100.0	487	100.0
Occupation of head:						
Professional			7	3.7	23	5.3
Managers, officials and proprietors			17	9.0	28	6.4
Clerical and kindred workers			8	4.3	37	8.5
Salesmen and kindred workers			12	6.4	20	4.6

Table 5. (Continued)

Selected characteristics	Farm		Rural nonfarm		Urabn	
	N	%	N	%	N	%
Occupation of head (continued):						
Craftsmen and kindred workers			49	26.1	91	21.1
Operatives and kindred workers			56	29.8	105	24.3
Service workers			17	9.0	66	15.3
Laborers			22	11.7	61	14.1
Farmers and farm managers	145	85.3				
Farm laborers and paid family workers	25	14.7				
Total	170	100.0	188	100.0	431	100.0
Dwelling tenure:						
Own, or own trailer but rent lot	92	54.1	142	65.1	235	48.3
Rent, or contributes to rent	11	6.5	55	25.2	225	46.2
Rent as part of salary or furnished by employer	13	7.6	5	2.3	3	0.6
Rent by crop, livestock, 50/50	47	27.4	1	0.5		
Rent free	7	4.1	15	6.8	24	4.9
Total	170	100.0	218	100.0	487	100.0
General condition of dwelling:						
Dilapidated	6	3.6	22	10.7	49	11.2
Deteriorating	47	28.3	50	24.4	131	29.8
Sound	113	68.1	133	64.9	259	59.0
Total	166	100.0	205	100.0	439	100.0
Health restricts activity of any household members:						
Severely or frequently	13	7.7	25	11.5	41	8.5
Somewhat or occasionally	26	15.4	22	10.1	54	11.1
Not at all	130	76.9	171	78.4	390	80.4
Total	169	100.0	218	100.0	485	100.0
Anomic tendencies:						
Anomic	70	41.2	76	34.9	199	40.9
Eunomic	100	58.8	142	65.1	288	59.1
Total	170	100.0	218	100.0	487	100.0

with 1.2% for farm and 10.3% for urban). In the cities, 15.4 per cent
of the economic units had a divorced or separated person as a head in
contrast with only 5.1 per cent for the rural nonfarm and 0.6 per cent
for the farm units.

There was little difference in the educational levels of the heads
in the three residential areas. Farm households had the highest per-
centage of heads who had completed less than 8th grade level. On the
other hand, the rural nonfarm had the highest percentage who had completed
12th grade. In the urban areas 48.9 per cent of the heads had completed
8th but not 12th, which is the highest among the three residential areas.

Seven eighths (85.3%) of the economic units on farms were farmers
and farm managers; the remainder were households of farm laborers. In
the rural nonfarm and urban units, the most frequent types of jobs were
craftsmen or operatives and their kindred workers.

In all three residential areas, half or more of the economic units
owned their homes (54.1% for farm, 65.1% for rural nonfarm, and 48.0%
for urban). Farm people had the highest percentage of dwellings in sound
condition, rural nonfarm the next, urban the next.

In each of the three residential areas more than three fourths of
the people were reported as in good physical health; about 10 percent of
people were judged as in poor health. Fewer respondents in the rural
nonfarm areas were anomic, that is, about one third in contrast with two
fifths for farm and urban respondents. This condition represents a
relatively higher tendency toward fatalism and normlessness as compared
with other respondents.

Estimation of the Income Gap

The central dependent variable of the present study was focused on estimates of minimum money income needed by the household economic units when consideration was given to size and composition of the household and to type of population area. The purpose was to ascertain the extent to which an "income gap" existed between each estimate of income needed and the amount reported by the respondent for the year, 1966.

A critical feature of the study was that of estimating "minimum income needed." Since the United States Social Security Administration has been doing intensive study of procedures for computing such estimates, the present writer decided to adapt one of these procedures which is often identified with Mollie Orshansky (1963, 1965a, 1965b, 1965c, 1968, 1969). The unique feature of her procedures is that all are based on estimated costs of providing food at "low-cost" levels, consistent with the age and sex composition of the household. The Orshansky procedure was adapted for the present study. The first step was to obtain an inventory from the Human Resources Study, of the residential location, sex and age characteristics of the 848 household economic units which reported money income for 1966. The cooperation of Mrs. Ava Klopf of the Statistical Laboratory's Survey Unit was unusually valuable in the provision of these data and the other kinds needed for the study.

Estimates were computed of the food cost for each household unit by use of the sex and age data from the Human Resources Study and the Table on "Cost of 1 Week's Food at Home Estimated for Food Plans at Three Cost Levels, December 1965, for the Northeast and North Central Regions", as

reported in the Family Economics Review for March, 1966, page 21 (see Appendix). Only the low-cost plan for the North Central Region was used. The present investigator used this low-cost food information to develop (a) estimated food costs per household member, and (b) estimated money income needed when food cost was multiplied by three as Orshansky had recommended. The key of money incomes needed according to sex and age is represented in Table 6. Finally, the income requirements for household members were added to obtain an estimated money income needed by the household as a unit.

Table 6. Estimates of annual money income needed for minimum level of living, by sex and age of household members

Type of house-hold member	Age level	Estimated minimum annual income needed (i.e. 3 times annual food costs at low levels of adequacy and cost)
Children:	Under 1 year	$ 515
	1 through 2 years	655
	3 through 5 years	764
	6 through 8 years	920
Girls:	9 through 11 years	1,045
	12 through 14 years	1,139
	15 through 19 years	1,217
Boys:	9 through 11 years	1,076
	12 through 14 years	1,232
	15 through 19 years	1,466
Women:	20 through 34 years	1,092
	35 through 54 years	1,061
	55 through 74 years	905
	75 years and over	827
Men:	20 through 34 years	1,248
	35 through 54 years	1,170
	55 through 64 years	1,045
	75 years and over	983

Having obtained estimates of annual money incomes needed by the 848

households, the matter of adjustments of these estimates was considered

in terms of (a) place of residence and (b) economy of scale within each

household. With respect to adjustments for place of residence, Orshansky

(Counting the Poor, 1965a,pp. 9-10) had said,

> ...Farm families today buy much of their food, in contrast to
> the situation 40 or 50 years ago when they depended almost entirely
> on their own production. Yet it was still true in 1955 that about
> 40 percent of the food items consumed by all farm families --
> valued at prices paid by any families who did buy them -- came from
> their home farm or garden. On the other hand, the food purchased
> represented -- as it did for the nonfarm families -- a third of
> total cash income for the year after deductions for operating
> expenses.

> Farm families generally can count not only some of their food
> but most of their housing as part of the farm operation. Tus,
> it was assumed that a farm family would need 40 percent less
> net cash than a nonfarm family of the same size and composition.

Orshansky was generalizing for the farm families of the nation as a

whole. Since the use of home grown food by farm households of the North

Central Region probably differs considerably from that of other sections

of the nation, the present investigator examined the relative proportions

of total annual money income spent for food by rural farm, rural nonfarm,

and urban families in the region (Appendix). The data used were from the

Survey of Consumer Expenditures for 1960-61 by the Bureau of Labor

Statistics of the United States Department of Labor. Due to the fact

that the expenditures of farm and rural nonfarm families were less than

urban families, a 25 per cent deduction of these estimates was made for

farm and rural nonfarm household economic units, based on the findings

reported in Table 18 of the Appendix.

The next step was to adjust for economy of scale within each household. For a family of four no adjustment was made since this was the household size on which the Orshansky formula was based. According to her procedure, a 15 per cent increase was made for households of one person, 10 per cent for two persons and five per cent for three persons. Similarly, for larger households who could economize in various ways because of their size, reductions were made by five per cent for five persons and 10 per cent for six or more persons.

The estimated money incomes needed were then arrayed from low to high and coded according to 19 levels or intervals; most of them represented a range of $500 (Table 7). Several differences among the three residential areas were found. Rural farm households had the lowest percentage of estimated incomes needed under $1,500. This fact reflected their larger size (Table 4). On the other hand, urban households had the highest percentage of estimated incomes needed over $5,500, and the needs of rural nonfarm units were the lowest (7.8% for urban, 3.6% for farm, 2.8% for rural nonfarm). Forty-three and five tenths per cent, of farm households, 56.4 per cent of rural nonfarm households and 45.4 per cent of urban households had estimated money incomes under $3,000. The median level was $3,000 to $3,499 for farm and urban and $2,500 to $2,999 for rural nonfarm.

Data in Table 8 report that, under the $5,000 income level in each of the three residential areas, the number of households with this amount of estimated-income-needed was greater than the number of households with this much reported actual income in 1966. Nineteen farm households

Table 7. Money income requirements estimated for household economic
          units, by residential area

Levels of estimated income needed		Farm estimates		Rural nonfarm estimates		Urban estimates	
		N	%	N	%	N	%
1 and 2	Under $1,500	8	4.7	42	19.3	73	15.0
3	$1,500 - $1,999	36	21.2	40	18.3	11	2.3
4	$2,000 - $2,499	13	7.6	19	8.7	79	16.2
5	$2,500 - $2,999	17	10.0	22	10.1	58	11.9
6	$3,000 - $3,499	27	15.9	29	13.3	42	8.6
7	$3,500 - $3,999	16	9.4	24	11.0	48	9.9
8	$4,000 - $4,499	26	15.3	16	7.3	44	9.0
9	$4,500 - $4,999	9	5.3	10	4.6	39	8.0
10	$5,000 - $5,499	12	7.0	10	4.6	55	11.3
11	$5,500 - $5,999	0	0.0	0	0.0	0	0.0
12	$6,000 - $6,499	2	1.2	2	1.0	8	1.7
13	$6,500 - $6,999	0	0.0	0	0.0	0	0.0
14	$7,000 - $7,499	0	0.0	3	1.4	14	2.9
15	$7,500 - $7,999	0	0.0	0	0.0	0	0.0
16	$8,000 - $8,499	1	0.6	1	0.4	7	1.4
17	$8,500 - $8,999	0	0.0	0	0.0	0	0.0
18	$9,000 - $9,499	1	0.6	0	0.0	2	0.4
19	$9,500 and over	2	1.2	0	0.0	7	1.4
	Total	170	100.0	218	100.0	487	100.0

Table 8. Relative distributions of actual money income received in 1966 and estimated-money-income-needed as estimated by the technique of this study

Income level	Actual money income	Farm Estimated income needed	Rural nonfarm Actual	Esti- mated	Urban Actual	Esti- mated
Refused to answer	6	0	4	0	17	0
Under $3,000	49	74	60	123	142	221
$3,000-$4,999	70	78	54	79	104	173
$5,000-$6,999	19	14	46	12	90	63
$7,000-$8,999	7	1	31	4	71	21
$9,000 and over	19	3	23		63	9
Total	170	170	218	218	487	487

had $9,000 and over actual income but only three households was estimated to need this much. For rural nonfarm, 23 households reported $9,000 and over income but none of them needed this much. Sixty three of urban households had $9,000 and over income, only nine of them was estimated to need that much.

The differences between the actual income reported and the estimated needed income were calculated and were arranged from lowest to highest and coded according to 14 levels. A code of 1 represented the largest gap, 6 to 8 indicated households on the margin of poverty, and 9 to 14 identified households whose 1966 incomes exceeded the estimates of "minimum

essential". These codes were then used as the dependent variable to
ascertain and describe circumstances which tended to be associated with
the extent to which there was a gap between actual and needed incomes.

Processing and Analysis

Certain information from the Human Resources Study was used in order
to develop a new set of data to represent the dependent variables in this
report. With this new information plus the original data, a new data
deck was made for the purpose of analysis. The process involved coding,
tabulation, machine calculation, gang punching some information from
the original cards and so on.

Twenty seven of the respondents had no answer on their actual incomes;
therefore the present study was based on information from 848 respondents.
The codes used for income gap ranged from 1 to 14. Residential zones were
represented by: 1 = farm, 2 = nonfarm and 3 = urban. Codes for the rest
of the variables were the same as for the Human Resources Study.

After all the information had been punched on cards, they were taken
to the Iowa State University Computing Center where frequency distributions
of extent of income gaps by selected characteristics were obtained in order
to make contingency tables. Since statisticians do not recommend the
Chi-square technique when the expected values are less than five, Chi-
square tests were performed for those variables having an expected value
of five and above. The independent variables which were significant in
Chi-square tests were then selected as "factors associated with extent of
income gap."

EXTENT OF THE INCOME GAP BY PLACE OF RESIDENCE

Before examining factors associated with the extent to which house-
holds in the present study had negative, marginal, or positive money income
gaps, attention was given to the distribution of households by size of
gap within the rural farm, rural nonfarm and urban residential areas, re-
spectively (Table 9). Considering all households in the study, the range
in amount of income gap was a negative $9167 for an urban household to a
positive $23,133 for a rural nonfarm unit. Negative income gaps of $1,000
or more were found for 17 per cent of the rural farm households, 9.5 per
cent of the rural nonfarm and 21.5 per cent of the urban. When the income
gaps between a negative and a positive $999 were considered as marginal,
44.4 per cent of the farm households were in this area in contrast with
28.9 and 27.4 per cent for the rural nonfarm and urban households. Three
fifths (61.4%) of the farm families were either at the margin or had com-
paratively inadequate incomes in contrast with one half (48.9%) of the
urban and two-fifths (38.4%) of the rural nonfarm units.

Thus, according to the data and procedures of the present study,
marginal or negative income gaps were most prevalent on farms, and least
for rural nonfarm households. The relatively larger size of the income
gap for farm households could have resulted from two of several possibili-
ties. First, the common tendency to compare money incomes without con-
sideration of household size may make farm households seem to be better
off than they really are, especially if their sources of nonmoney income

Table 9. Distribution of household economic units among scores for income gap, by residential area

Scores for income gap		Distributions of household scores					
		Farm		Rural nonfarm		Urban	
		N	%	N	%	N	%
Income inadequate by:							
$3,000 and over	1	2	1.2	1	0.5	20	4.3
$2,999-$2,500	2	4	2.4	1	0.5	7	1.5
$2,499-$2,000	3	1	0.6	4	1.9	8	1.7
$1,999-$1,500	4	7	4.3	7	3.3	34	7.2
$1,499-$1,000	5	14	8.5	7	3.3	32	6.8
$ 999 $ 500	6	14	8.5	11	5.1	26	5.5
$ 499 $ 0	7	20	12.2	21	9.8	34	7.2
Adequate incomes:							
$ 0-$ 499	8	25	15.2	13	6.1	30	6.4
$ 500-$ 999	9	14	8.5	17	7.9	39	8.3
$1,000-$1,499	10	6	3.7	13	6.1	23	4.9
$1,500-$1,999	11	9	5.5	14	6.5	20	4.3
$2,000-$2,499	12	8	4.9	17	7.9	21	4.5
$2,500-$2,999	13	6	3.7	9	4.2	25	5.3
$3,000 and over	14	34	20.8	79	36.9	151	32.1
Total		164	100.0	214	100.0	470	100.0
Summary:							
Negative gap of $1000 or more			17.0		9.5		21.5
Marginal gap of 0 ± $999			44.4		28.9		27.4
Positive gap of $1000 or more			38.6		61.6		51.1
Total			100.0		100.0		100.0

are not appreciably larger than those of nonfarm households. But, with respect to nonmoney income, other problems arise as to the amounts by which farm family money income requirements may justifiably be lower because of the use-value of housing obtained as a part of the farm enterprise as well as the food production for home use. An intensive study of sources

and amounts of money and nonmoney incomes of farm, rural nonfarm and urban families would help to answer this question.

As has been explained in the procedure, and in the more detailed statement of the Appendix, both rural farm and rural nonfarm estimates of income needed were adjusted in the present study to be 75 per cent of the estimated urban requirements. This decision was based on the comparisons of incomes and expenditures of the two types of rural households with those living in urban areas, using data reported in Table 10 from the Survey of Consumer Expenditures of 1960-61. When the findings of the present study revealed that, compared with urban households, the tendencies to have inadequate money incomes were greatest in farm families and lowest in the rural nonfarm units, questions arose concerning the likelihood that adjustments for farm households had been too small and those of rural nonfarm were too large. If so, the estimated income gap of farm households would be skewed negatively and those of rural nonfarm would be disproportionately positive. To examine this possibility further, study was made of the comparative 1960-61 incomes and expenditures of households of the three residential areas, when controls were used first for number in the household and second for level of income.

As noted in Table 10 for households of four persons, farm expenditures for consumption as a whole, and for food in particular, were slightly over 60 per cent of the urban outlays. At the same time, these two types of consumption expenditures in rural nonfarm households were about 80 per cent of the urban. When households in the three areas were restricted to

Table 10. Comparison of average money incomes and expenditures for rural and urban households of four persons, families and single consumers, U.S.A., 1960-61[a]

Average money incomes and expenditures	Families and single consumers					
	North Central Region				United States	
	Rural farm		Rural nonfarm		Urban	
	Amt.	% urban	Amt.	% urban	Amt.	%
Households:						
Money income before tax	$5,624	68.6	$6,580	80.2	$8,204	100.0
Money income after tax	5,254	73.0	5,797	79.4	7,301	100.0
Total money receipts[b]	7,658	79.3	7,385	76.5	9,657	100.0
Net change in assets and liabilities	+485	183.0	+218	82.3	+265	100.0
Consumption expenditures[c]	4,386	65.2	5,391	80.1	6,730	100.0
Food expenditures	1,025	61.6	1,362	81.9	1,664	100.0

[a]Adapted from: U.S. Department of Agriculture, Agricultural Research Service. Consumer Expenditure Survey Report No. 2, (April 1965); U.S. Department of Labor, Bureau of Labor Statistics. Survey of Consumer Expenditures Report No. 237-85 (June 1964); U.S. Department of Labor, Bureau of Labor Statistics, Survey of Consumer Expenditures, supplement to report 237-90 (June 1960).

[b]Includes money income after taxes, other money receipts, decrease in assets and increase in liabilities.

[c]Includes expenditures for consumption plus those for personal insurance, gifts and contributions.

those within the $3,000 to $3,999 income level (after taxes) in 1960-61, the per capita percentages for rural farm consumption approximated 60 per cent of the urban while those of rural nonfarm were 73.2 per cent for total consumption and 81.3 per cent for food outlays (Table 11). Therefore,

Table 11. Comparison of average money incomes and expenditures for rural and urban families and single consumers within the $3,000-$3,999 income level (after taxes), 1960-61[a]

Average money incomes and expenditures	Families and single consumers					
	North Central Region				United States	
	Rural farm		Rural nonfarm		Urban	
	Amt.	% urban	Amt.	% urban	Amt.	%
No. persons in household	3.8		3.4		2.7	
Households:						
Money income before tax	$3,711		$3,687		$3,789	
Money income after tax	3,523		3,492		3,528	
Total money receipts[b]	5,206		4,533		4,692	
Net change in assets and liabilities	+124		+24		-279	
Consumption expenditures[c]	3,490		3,741		4,100	
Food expenditures	808		1,048		982	
Per capita:						
Money income before tax	$ 977	69.6	$1,084	77.3	$1,403	100.0
Money income after tax	927	70.9	1,027	78.6	1,307	100.0
Total money receipts[b]	1,370	78.8	1,333	76.7	1,738	100.0
Consumption expenditures	846	60.4	1,026	73.2	1,401	100.0
Food expenditures	213	58.5	296	81.3	364	100.0

[a]Adapted from: U.S. Department of Agriculture, Agricultural Research Service. Consumer Expenditure Survey Report No. 2, (April 1965); U.S. Department of Labor, Bureau of Labor Statistics, Survey of Consumer Expenditures Report No. 237-85 (June 1964); U.S. Department of Labor, Bureau of Labor Statistics, Survey of Consumer Expenditures, (supplement to report 237-90, June 1966).

[b]Includes money income after taxes, other money receipts, decrease in assets and increase in liabilities.

[c]Includes expenditures for consumption plus those for personal insurance, gifts and contributions.

in the judgment of the present investigator, further study should be made of the Human Resources data in which a correction factor of 30 to 35 per cent would be used for farm households and one of 15 or 20 per cent for rural nonfarm units. The exact correction factors should be selected only after more thorough examination of income and expenditure relation- ships among the three residential areas.

FACTORS ASSOCIATED WITH EXTENT OF INCOME GAP

As reported on pages 25 to 27, four general hypotheses were proposed concerning association of the extent of money income gaps with selected characteristics of the households from whom data had been obtained. The four general independent variables were: 1) household composition, 2) residential characteristics, 3) economic attributes and 4) social orientations. Each of these was represented by several more specific empirical hypotheses. The Chi-square technique was used to test whether or not variations in the dependent and independent variables were significantly associated.

Household Composition

Of 13 empirical hypotheses tested in relation to five characteristics of household composition, nine were found to be significantly associated with the extent of income gap (Table 12). In the nonfarm residential areas (i.e., rural nonfarm and urban), all factors were associated except age of head. These were number of children, sex of head, marital status and health as a restriction of activity. However, for the farm households, number of children was the only one of the five characteristics tested which was revealed as being associated significantly with extent of income gap. Further, number of children was the only characteristic of household composition which was significantly associated with extent of income gap in all three residential areas.

As would be expected, the extent of the negative income gap increased as the number of children was larger. Generalizing for the three residen-

tial areas, from three fifths to three fourths of households with three or more children were classified as having negative income gap. In contrast, two thirds to three-fourths of the households with fewer than three children had incomes at least $1,000 above the amounts estimated by the present investigator as the amounts they needed.

Table 12. Design for testing associations of dependent and independent variables plus results of Chi-square tests

Selected characteristics of the economic units (independent variables)	Relative extent of income gaps by residential area (dependent variable)		
	Farm	Rural nonfarm	Urban
Household composition:			
Number of children	.0005	.001	.0005
Age of head	ns[a]	ns	ns
Sex of head	--[b]	.05	.0005
Marital status	--[b]	.01	.0005
Health as a restriction of activity	ns	.005	.0005
Residence:			
Size of urban population(zone)	XXX[c]	XXX	ns
Residential tenure (nonfarm)	--[b]	ns	.0005
Frequency of moving	ns	--[b]	.001

[a]ns - not significant.

[b]No test was made because expected numbers in one or more cells was less than 5.

[c]XXX = no hypothesis proposed.

Table 12. (Continued)

Selected characteristics of the economic units (independent variables)	Relative extent of income gaps by residential area (dependent variable)		
	Farm	Rural nonfarm	Urban
Economic attributes:			
Education of head	ns	ns	.05
Occupational type (nonfarm)	XXX	--b	--b
Head not out of work for 15 or more days	ns	--b	ns
Condition of dwelling	--b	--b	--b
Own a car or a truck	--b	.0005	.0005
Social orientations:			
Level of education as measure of being disadvantaged	ns	ns	ns
Welfare status	ns	--b	.001
Anomie-eunomie score	ns	.01	.005
Comparison of family standard of living with that of:			
Relatives and old friends	.05	.01	.0005
Immediate neighbors	.05	.0005	.0005
Social friends and acquaintances	ns	--b	.0005
Number of organizations attended by husband	ns	.01	.0005

Thus, the null hypothesis that household composition was not associated with the size of the income gap was rejected for the nonfarm but not for the farm households except for age of head. The nature of the trends may be summarized by noting the extents to which the households with negative, marginal, and positive income gaps tended to manifest some of the less desirable attributes of family life, especially from the point of view of family welfare. In brief:

		Lowest per cent	Middle per cent	Highest per cent
Three or more children:				
	Farm	Non-poor 24.7	Marginal 42.4	Poorest 78.6
	Rural nonfarm	Marginal 31.1	Non-poor 38.2	Poorest 75.0
	Urban	Marginal 17.8	Non-poor 23.3	Poorest 60.4
Female head:	Rural farm	Non-poor 16.1	Marginal and poor 29.2	
	Urban	Non-poor 16.5	Poorest 40.6	Marginal 46.7
Not married	Rural nonfarm	Non-poor 21.5	Marginal and poorest 38.5	
	Urban	Non-poor 24.1	Poorest 45.5	Marginal 55.6
Health restricts activity:				
	Rural nonfarm	Non-poor 14.8	Poorest 30.0	Marginal 37.8
	Urban	Non-poor 13.4	Poorest 25.7	Marginal 32.2

From the foregoing it will be noted that for the households with marginal income gaps of - $999 to + $499, the frequencies of highest percentages for the less desirable characteristics fluctuated among lowest, middle and highest. This finding reflects the fact that level of needed income is not the dominant characteristic associated with the likelihood of households to have these characteristics. Of the nine attributes for which the Chi-square tests revealed significant associations, the households with marginal income gaps were highest in the less desirable characteristics as many times as were those with negative income gaps of $1,000 and above.

Table 13. Household composition as a factor associated with extent of money income gaps

Household composition factors by place of residence	Distributions by extent of income gap							
	Negative (poor)		Marginal		Positive (non-poor)		Total	
	N	%	N	%	N	%	N	%
Number of children:								
Farm								
0 to 2 children	6	21.4	34	57.6	58	75.3	98	59.8
3 or more children	22	78.6	25	42.4	19	24.7	66	40.2
Total	28	100.0	59	100.0	77	100.0	164	100.0

X^2 at 2 d.f. = 25.0 > 15.2 = .005 level

Rural nonfarm								
0 to 2 children	5	25.0	31	68.9	101	67.8	137	64.0
3 or more children	15	75.0	14	31.1	48	32.2	77	36.0
Total	20	100.0	45	100.0	149	100.0	214	100.0

X^2 at 2 d.f. = 14.6 > 13.8 = .001 level

Table 13. (Continued)

Household composition factors by place of residence	Distributions by extent of income gap							
	Negative (poor)		Marginal		Positive (non-poor)		Total	
	N	%	N	%	N	%	N	%
Urban								
0 to 2 children	40	39.6	74	82.2	214	76.7	328	69.8
3 or more children	61	60.4	16	17.8	65	23.3	142	30.2
Total	101	100.0	90	100.0	279	100.0	470	100.0

x^2 at 2 d.f. = 56.6 > 15.2 = .0005 level

Sex of head:

Rural nonfarm								
Male			46		70.8	125	83.9	171	80.0
Female			19		29.2	24	16.1	43	20.0
Total			65		100.0	149	100.0	214	100.0

x^2 at 1 d.f. = 4.9 > 3.8 = .05 level

Urban								
Male	60	59.4	48	53.3	233	83.5	341	72.6
Female	41	40.6	42	46.7	46	16.5	129	27.4
Total	101	100.0	90	100.0	279	100.0	470	100.0

x^2 at 2 d.f. = 42.3 > 15.2 = .0005 level

Marital status:

Rural nonfarm								
Married			40		61.5	117	78.5	157	73.4
Non married			25		38.5	32	21.5	57	26.6
Total			65		100.0	149	100.0	214	100.0

x^2 at 1 d.f. = 6.66 > 3.84 = .01 level

Urban								
Married	55	54.5	40	44.4	211	75.8	306	65.2
Not married	46	45.5	50	55.6	67	24.1	163	34.8
Total	101	100.0	90	100.0	278	100.0	469	100.0

x^2 at 2 d.f. = 36.27 > 15.2 = .0005 level

Health as a restriction of activity:

Rural nonfarm								
Yes	6	30.0	17	37.8	22	14.8	45	21.0
No	14	70.0	28	62.2	127	85.2	169	79.0
Total	20	100.0	45	100.0	149	110.0	214	100.0

x^2 at 2 d.f. = 12.09 > 10.6 = .005 level

Table 13. (Continued)

Household composition factors by place of residence	Distributions by extent of income gap							
	Negative (poor)		Marginal		Positive (non-poor)		Total	
	N	%	N	%	N	%	N	%
Urban								
Yes	26	25.7	29	32.2	37	13.4	92	19.7
No	75	74.3	61	67.8	240	86.6	376	80.3
Total	101	100.0	90	100.0	277	100.0	468	100.0

$$X^2 \text{ at 2 d.f.} = 40.46 > 15.2 = .0005 \text{ level}$$

Residential Characteristics

Of the five empirical hypotheses tested to ascertain the association of three residential characteristics with the tendency to have a negative income gap, only two were rejected (Table 12). Whether rural residences were rented or owned, and the frequencies of moving from residence to residence, by farm or rural nonfarm households, were not associated with the nature of the income gap.

The two statistically significant Chi-square coefficients obtained were for the income gaps of urban households in association with residential tenure and frequency of moving (Table 14). The poorest (i.e. largest negative income gap) households were most often renters (76.2%) in contrast with 62.2 per cent for those with marginal income gap and 41.2 per cent for the relatively non-poor. With respect to frequencies of moving, 90.9 per cent of the poorest households had moved two or more times in contrast

with 77.3 per cent for the marginal income class and 75.4 per cent for the
relatively non-poor. Almost three fourths (71.7%) of the poorest had
moved more than two times as compared with 49.7 per cent of the nonpoor.
These findings reveal the tendencies of urban households, whose incomes are appreciably lower than the amounts estimated as needed by them, have considerably higher tendencies toward instability of residence than do the other
households. To reduce this instability to a more reasonable proportion,
attention should be given not only to increases in money income but also
to other conditions which force or motivate low-income households to move
frequently and to rent rather than own their homes.

Table 14. Residence as a factor associated with extent of money income gap

| Residence factors by place of residence: | Distributions by extent of income gap | | | | | | | |
| | Negative (poor) | | Marginal | | Positive | | Total | |
	N	%	N	%	N	%	N	%
Residential tenure:								
Urban:								
Own	24	23.8	34	37.8	164	58.8	222	47.2
Rent	77	76.2	56	62.2	115	41.2	248	52.8
Total	101	100.0	90	100.0	279	100.0	470	100.0

x^2 at 2 d.f. = 40.46 > 15.2 = .0005 level

Frequency of moving:								
Urban								
1	9	9.1	20	22.7	68	24.6	97	20.9
2	19	19.2	14	15.9	71	35.7	104	22.5
More than 2	71	71.7	54	61.4	137	49.7	262	56.6
Total	99	100.0	88	100.0	276	100.0	463	100.0

x^2 at 4 d.f. = 18.73 > 18.5 = .001 level

Economic Attributes

Five economic attributes were considered in relation to the tendencies of families in the present study to have negative, marginal and positive income gaps. Of seven empirical hypotheses tested (Table 12), only three were found to be associated with one or more of these economic situations. One of these was for rural nonfarm households and two were for the urban units. Only two factors were tested for the farm households and neither resulted in a statistically significant Chi-square coefficient. Of two tests made for rural nonfarm units, only the ownership of a car or a truck was significantly associated. Two of the three tests for the urban households were found to be significantly associated with tendencies to have inadequate money incomes. A summary of these findings is as follows:

	Lowest per cent	Middle per cent	Highest per cent
Had not completed 12th grade:			
Urban	Non-poor 53.8	Marginal 58.9	Poorest 70.3
Did not own a car or truck:			
Rural nonfarm	Non-poor 6.0	Marginal and poorest 23.1	
Urban	Non-poor 16.5	Marginal 46.7	Poorest 48.5

Thus, according to the data and procedures of the present study, the tendency to be poor was highly associated with the relatively inadequacies of education of urban households. However, for the rural households there was no evidence that education was a significant factor. Since most farm

households own a car or a truck, no tests were made because of low numbers in some of the cells. However, it is obvious that limited incomes and lack of a car or truck for transportation tend to be common characteristics for about a fourth of the rural nonfarm households and about a half of those in the urban areas.

Table 15. Economic attributes as factors associated with extent of money income gap

Economic attributes as factors, by place of residence	Negative (poor)		Marginal		Positive (non-poor)		Total	
	N	%	N	%	N	%	N	%
Education of head:								
Urban								
Has not completed 8th grade	7	6.9	7	7.8	26	9.3	40	8.5
Has completed 8th but not 12th	64	63.4	46	51.1	124	44.5	234	49.8
Has completed 12th grade	30	29.7	37	41.1	129	46.2	196	41.7
Total	101	100.0	90	100.0	279	100.0	470	100.0
	x^2 at 4 d.f. = 10.77 > 9.49 = .05 level							
Own can or truck:								
Rural nonfarm								
Own	5		76.9		140	94.0	190	88.8
Did not own	15		23.1		9	6.0	24	11.2
Total	65		100.0		149	100.0	214	100.0
	x^2 at 1 d.f. = 13.20 > 12.1 = .0005 level							
Urban								
Own	52	51.5	48	53.3	233	83.5	333	70.9
Did not own	49	48.5	42	46.7	46	16.5	137	29.1
Total	101	100.0	90	100.0	279	100.0	470	100.0
	x^2 at 2 d.f. = 53.36 > 15.2 = .0005 level							

Social Orientations

Five indicants were used to represent the social orientations of the respondents in the present study. These were the welfare status of the household, number of organizations attended by the husband and the level of education as measure of being disadvantaged, the anomie-eunomie score of the respondent, and her judgments concerning her family's current standard of living compared with three types of other living situations (Table 12). Of 19 empirical tests made, 12 characteristics were found to be significantly associated with the tendencies of households to have negative, marginal or positive adequate income gaps. Two of these associations were for farm households, four for the rural nonfarm and six for the urban units. The level of education as measure of being disadvantaged was not associated with income gap in any of the three types of population studied. The respondent's comparison of the family's standard of living with those of (a) relatives and old friends and (b) immediate neighbors were significant variables in all three residential areas. The anomie-eunomie scores and the number of organizations attended during the past year by the husband were significant for the nonfarm areas but not for the farm households. Only for the urban households was the welfare status and the respondent's comparisons of standards of living with those of social friends and acquaintances significantly associated with the level of the income gap.

A more clear cut picture of the findings, as related to social orientations as factors related to the tendencies of households to have incomes in 1966 which were less than the present researcher had estimated as the amounts

needed, is revealed by the following summary. (See Table 16 for details.)

		Lowest per cent	Middle per cent	Highest per cent

Had received Social Security and/or some
other source of public welfare or
relief assistance

		Non-poor	Marginal	Poorest
Yes	Urban	14.6	19.3	33.8

Tendency to be anemic

		Non-poor	Marginal	Poorest
	Rural nonfarm	28.2	48.9	55.0

		Non-poor	Poorest	Marginal
	Urban	33.3	48.5	55.6

Husband attended no organization
meetings during past year:

		Non-poor	Marginal	Poorest
	Rural nonfarm	41.6	68.9	70.0

		Non-poor	Poorest	Marginal
	Urban	41.6	63.4	67.8

Standard of living believed
poorer than those of--
relatives and old friends:

		Non-poor	Marginal	Poorest
	Rural nonfarm	17.9	23.3	50.0

		Non-poor	Marginal	Poorest
	Urban	7.2	41.1	45.4

immediate neighbors:

		Non-poor	Poorest	Marginal
Farm		9.5	25.0	26.3

		Non-poor	Marginal	Poorest
Rural nonfarm		24.6	42.5	66.7

		Non-poor	Marginal	Poorest
Urban		16.9	28.9	42.4

social friends and ac-
quaintances:

		Non-poor	Poorest	Marginal
Urban		41.6	63.4	67.8

From the above distributions it was found that, in the residential
areas where significant associations were found for indicants of social

orientation, the households with positive income gaps of $500 or more were always the ones with the lowest percentages of comparatively undesirable characteristics. In contrast, in eight of 11 tests reported in the summary, the highest percentages of relatively undesirable indicants were among the households whose income gaps were negative by $1,000 or more. For farm households the only indicant which was associated with income gap was the respondents' comparisons of their families standards of living with immediate neighbors.

The foregoing findings revealed some of the circumstances which were associated with tendencies to have marginal or relatively inadequate incomes when types of residence and the size and composition of the households were considered. In so far as the data permit, more refined generalizations could be made if analysis of variance or regression analysis were used to examine the interaction of the factors found to be significant ones in this study.

Table 16. Social orientations as factors associated with extent of money income gaps

Social orientation factors by place of residence	Distributions by extent of income gap							
	Negative (poor)		Marginal		Positive (non-poor)		Total	
	N	%	N	%	N	%	N	%
Welfare status:								
Urban								
Are the parents of the head of household receiving any public welfare or relief assistance?								
No	31	40.2	33	57.9	120	58.5	184	54.3
Social Security only	20	26.0	13	22.8	55	26.8	88	26.9
Social Security and some other	26	33.8	11	19.3	30	14.6	67	19.8
Total	77	100.0	57	100.0	205	100.0	339	100.0

X^2 at 4 d.f. = 14.25 $>$ 13.3 = .001 level

Table 16. (Continued)

Social orientation factors by place of residence	Distributions by extent of income gap							
	Negative (poor)		Marginal		Positive (non-poor)		Total	
	N	%	N	%	N	%	N	%

Anomie score:

Rural nonfarm

	N	%	N	%	N	%	N	%
Anomia	11	55.0	22	48.9	42	28.2	75	35.0
Eunomia	9	45.0	23	51.1	107	71.8	139	65.0
Total	20	100.0	45	100.0	149	100.0	214	100.0

X^2 at 2 d.f. = 10.35 > 9.21 = .01 level

Urban

	N	%	N	%	N	%	N	%
Anomia	49	48.5	50	55.6	93	33.3	192	40.9
Eunomia	52	51.5	40	44.4	186	66.7	278	59.1
Total	101	100.0	90	100.0	279	100.0	470	100.0

Standard of living compared with relatives and old friends:

Farm

	N	%	N	%	N	%	N	%
This household less well off	9	32.1	8	14.0	9	11.8	26	16.1
This household better off or same	19	67.9	49	86.0	67	88.2	135	83.9
Total	28	100.0	57	100.0	74	100.0	161	100.0

X^2 at 2 d.f. = 6.52 > 5.99 = .05 level

Rural nonfarm

	N	%	N	%	N	%	N	%
This household less well off	10	50.0	10	23.3	26	17.9	46	22.1
This household better off or same	10	50.0	33	76.7	119	82.1	162	77.9
Total	20	100.0	43	100.0	145	100.0	208	100.0

X^2 at 2 d.f. = 10.5 > 9.21 = .01 level

Urban

	N	%	N	%	N	%	N	%
This household less well off	45	45.4	37	41.1	17	7.2	99	23.3
Same	37	37.4	43	47.8	157	66.8	237	55.9
This household better off	17	17.2	10	11.1	61	26.0	88	20.8
Total	99	100.0	90	100.0	235	100.0	424	100.0

X^2 at 4 d.f. = 27.72 > 20.0 = .0005 level

Table 16. (Continued)

Social orientation factors by place of residence	Distributions by extent of income gap							
	Negative (poor)		Marginal		Positive (non-poor)		Total	
	N	%	N	%	N	%	N	%
Standard of living compared with immediate neighbors:								
Farm								
This household less well off	7	25.0	15	26.3	7	9.5	29	18.2
This household better or same	21	75.0	42	73.7	67	90.5	130	81.8
Total	28	100.0	57	100.0	74	100.0	159	100.0
X^2 at 2 d.f. = 7.18 > 5.99 = .05 level								
Rural nonfarm								
This household less well off	12	66.7	17	42.5	34	24.6	63	32.1
This household better off or same	6	33.3	23	57.5	104	75.4	133	67.9
Total	18	100.0	40	100.0	138	100.0	196	100.0
X^2 at 2 d.f. = 15.35 > 15.2 = .0005 level								
Urban								
This household less well off	36	42.4	22	28.9	44	16.9	102	24.2
Same	37	43.5	46	60.6	166	63.6	249	59.0
This household better off	12	14.1	8	10.5	51	19.5	71	16.8
Total	85	100.0	76	100.0	261	100.0	422	100.0
X^2 at 4 d.f. = 25.81 > 20.0 = .0005 level								
Standard of living compared with social friends and acquaintances:								
Urban								
This household less well off	64	63.4	61	67.8	116	41.6	241	51.3
Same	28	27.7	22	24.4	85	30.5	135	28.7
This household better off	9	8.9	7	7.8	78	27.9	94	20.0
Total	101	100.0	90	100.0	279	100.0	470	100.0
X^2 at 4 d.f. = 35.41 > 20.0 = .0005 level								
Different organizations attended by head:								
Rural nonfarm								
None	14	70.0	31	68.9	62	41.6	107	50.0

Table 16. (Continued)

Social orientation factors by place of residence	Distributions by extent of income gap							
	Negative (poor)		Marginal		Positive (non-poor)		Total	
	N	%	N	%	N	%	N	%
Rural nonfarm (continued)								
one	4	20.0	8	17.8	44	29.5	56	26.2
two	2	10.0	6	13.3	43	28.9	51	23.8
Total	20	100.0	45	100.0	149	100.0	214	100.0

$$x^2 \text{ at 4 d.f.} = 14.27 > 13.3 = .01 \text{ level}$$

Urban								
None	64	63.4	61	67.8	116	41.6	241	51.3
One	28	27.7	22	24.4	85	30.5	135	28.7
Two	9	8.9	7	7.8	78	27.9	94	20.0
Total	101	100.0	90	100.0	279	100.0	470	100.0

$$x^2 \text{ at 4 d.f.} = 35.41 > 20.0 = .0005 \text{ level}$$

SUMMARY

The present study was undertaken for two purposes. The first of
these was to determine the extent to which there were negative and posi-
tive gaps between (a) money incomes reported by Iowa households for 1966
and (b) the money incomes needed by those economic units as estimated by
a technique adapted from one developed by the Social Security Adminis-
tration of the United States. The second purpose was to identify the
tendencies of selected characteristics of the housefhold in the sample
to be associated with the nature and extent of the income gaps.

In February, 1967, a study of Human Resources had been conducted by
social scientists at Iowa State University to provide information for
planning and conducting an extensive educational project on "Dimensions
of Welfare" by the Iowa Cooperative Extension Service. A total of 875
usable records were obtained from a random sample of households in all
parts of Iowa. This sample had been drawn by the Iowa State University
Statistical Survey Unit of Iowa. Since 27 of the households interviewed
did not report estimated money income for 1966, the present study was
based on 848 records. They represented 164 rural farm households, 214
rural nonfarm units, and 470 urban households. The respective mean in-
comes for these residential areas were $3,240, $2,790, and $3,500.

During the literature search to develop background for the study,
four questions were kept in mind.

1. How may money income be viewed as one of several components of
   the various resources mixes?

2. Why is measurement of income adequacy essential for establish-
    ing policies and conducting programs related to achievement of
    minimum levels of well being?

3. What procedures have been proposed or used for determining
    minimum money income levels?

4. What characteristics of the household economic units tend to be
    associated with the extent of income inadequacies?

Information gained in answering these questions was used to design the
present study.

It was assumed that nonmoney as well as money resources are essential
to achieve minimum adequate levels of consumption and living. Use-income
from durable prpoerties on hand, financial savings on which the family
may draw if necessary, opportunities provided by the community, and
human resources, are mixed with money to various degrees for achieving
as much as possible of the way of life desired. Further, the effective-
ness with which resources of the various kinds are procured, controlled
and used, may make a great difference in the relative welfare of the
family and its members. Finally, environmental conditions such as the
changing purchasing power of the dollar, availability of "free goods and
services" such as commodity foods or food stamps, and the like, will in-
fluence the level of need of money income for a given level of consumption.
Even though all of these nonmoney resources are important, in an economy
such as in the United States, money income is an essential ingredient
of the overall resource mix.

Individuals and families find themselves in widely differing circumstances with respect to the gaps between (a) what they or others consider as minimum essentials of life and (b) their abilities to achieve these minimum essentials or higher levels of living. For some, command of resource supplies, and abilities to use those resources productively, are much larger than necessary for minimum-to-moderate needs. For others, the situation is quite the opposite. Some of the many factors which probably contribute to these differences are resources of physical, mental, social and emotional health along with levels of education, employment opportunities, and size of household. The latter factor becomes more and more relevant as consumption approaches what some persons call "the poverty line". The difficulties which many household units have in "breaking even" with respect to money income and outflow is one of the reasons why much attention is being given to possible ways of estimating money incomes needed in given household situations.

The United States Social Security Administration has been making intensive studies of procedures for computing minimum money incomes needed. These procedures, often identified with Mollie Orshansky (1963, 1965a,b,c, 1968, 1969) were adapted for the present study. They are based on estimated costs of providing food at "low-cost" levels, consistent with the age and sex composition of the household.

The dependent variable in the present study was represented by estimates of the minimum incomes needed for each of the 848 household economic units.

The first step was to get information from data of the Human Re-

sources Study, for the sex and ages of members in each household unit within the three residential locations (i.e., farm, rural nonfarm, and urban). With this information, plus a low-cost feed plan for the North Central Region (Table 17), the present investigator developed (a) estimated food costs per household member and (b) estimated money income needed when the food cost was multiplied by three as Orshansky had recommended. This multiple of three had been used because previous income-expenditure studies in the United States had revealed that urban families at low income levels tended to spend about a third of the money they had for food. The requirements for household members were added to obtain an estimate of money income needed by the household as a unit.

Since farm families often have considerable supplies of food from household production, i.e., without outlay of money income, Orshansky (1965, pp. 9-10) assumed that a farm family would need 40 per cent less net cash than a nonfarm family of the same size and composition. As far as the present writer could discover, Orshansky gave no special attention to differences in sources of goods and services by rural nonfarm households as compared with the urban. However, from the 1960-61 survey of incomes and expenditures in the North Central Region, it was evident to the present investigator that both incomes and expenditures of rural farm and rural nonfarm households were appreciably less than for urban units. Further, the mean number of persons per household decreased as the trend toward urbanization increased.

Hence, criteria for adjusting the original estimated income based on

the Orshansky formula for urban households had to be determined. Con-
siderable study was made, on both household and per capita bases, of the
relative proportions which rural farm and rural nonfarm incomes and ex-
penditures (including food expenditures) were of urban household units.
Farm and rural nonfarm outlays for consumption, (including insurance
premiums, gifts, and contributions) were 64.8 per cent and 78.2 per cent
of those for the urban area. When average per capita food expenditures
were examined, using urban outlays for food as a base, those for the
farm area were 73.3 per cent and for rural nonfarm were 85.8 per cent.
Since Orshansky had made no adjustment for rural nonfarm estimates of
income needed, along with the fact that her reduction of the farm esti-
mate by 40 per cent appeared to many to be unreasonably large, the present
investigator decided to use a correction factor of 25 per cent for both
types of rural households. She was aware that this factor might be too
much for the rural nonfarm units and not enough for the farm households.
However, she could find no guidelines for identification of more appro-
priate adjustment factors for each of the two rural areas. Therefore,
the estimates for money income needed by rural households, based on the
urban formula, were all reduced by 25 per cent.

Although the number, sex and ages of household members were the basis
for estimating money income needed, the problem of economy of scale also
had to be dealt with. Here, the procedure of Orshansky was adopted. For
a family of four, no adjustment was made. A 15 per cent increase was
used for households of one person, 10 per cent for two persons, and
five per cent for three persons. For the larger households who could

economize in various ways, reductions were made by five per cent for five persons, and 10 per cent for six or more persons. Thus, the dependent variable of the present study -- namely, estimated money income needed -- was a computation based on the Orshansky formula for an urban household of four persons, in turn adjusted by a correction factor of 25 per cent when the households were rural farm or rural nonfarm and also adjusted for economy of scale.

The differences between (a) actual income as reported by respondents in the Human Resources Study and (b) the estimated income needed were arrayed from lowest to highest and coded according to 14 intervals. A code of 1 represented the negative gap of $3,000 or more, codes of 6 to 8 represented marginal gaps from a negative of less than $999 to a positive gap of $499, and Codes of 9 to 14 represented households having positive income gaps, that is, more than the minimum needed.

An overview of the distributions of households within each of the three residential areas, according to level and characteristics of the income gap, revealed that rural nonfarm households had the highest proportions of positive gaps of $1,000 or more. The highest percentage with marginal gaps were the farm households, while urban units were most likely to have negative income gaps of $1,000 or more.

Similarly, said in a different way, the farm units were most prone to have marginal or negative income gaps, the urban households were in the middle and the rural nonfarm least often had incomes less than the amounts estimated as needed. From this finding, it appeared that

the correction factor of 25 per cent probably was too small for the
farm households and too large for those in the rural nonfarm areas.
Further study should be made to ascertain the most appropriate correc-
tion factors for rural households.

The last objective of the study was to discover whether or not cer-
tain household characteristics tended to be associated significantly
with the proneness of economic units in the three residential areas
to have money income gaps. Any characteristics which could be identi-
fied by such analyses, could then be studied by more precise methods
and techniques than were used in the present study. The purpose would
be to ascertain the comparative relevance of the factors for the ten-
dencies of households to have incomes lower than the amounts estimated
to be needed by them.

Significant associations of the extents of income gap with the in-
dependent variables are summarized as follows for the three areas of
residence of the households studied.

Farm households:

    .0005   Number of children

    .05   Standard of living compared with those of relatives
            and old friends

    .05   Standard of living compared with immediate neighbors

Rural nonfarm households:

    .0005   Standard of living compared with immediate neighbors

    .0005   Own a car or truck

.005 Health as a restriction of activity

.001 Number of children

.01 Marital status

.01 Anomie score

.01 Standard of living compared with relatives and old friends

.01 Number of organizations attended by head

.05 Sex of head

Urban households:

.0005 Number of children

.0005 Sex of head

.0005 Marital status

.0005 Health as a restriction of activity

.0005 Residential tenure

.0005 Own car or truck

.0005 Anomie score

.0005 Standard of living compared with relatives and old friends

.0005 Standard of living compared with immediate neighbors

.0005 Standard of living compared with social friends

.0005 Number of organizations attended by head

.001 Frequency of moving

.001 Welfare status

.05 Education of head

From the findings of the study it appeared that three kinds of further research are needed. As previously mentioned, more valid corrections factors should be identified for adjusting estimated incomes needed by rural farm and nonfarm households when the requirements of urban households of four persons are used as a base. Second, as degree of urban income increases, larger numbers of independent variables were found to be associated significantly with the nature and extent of income gap. This may have resulted from the fact that the sample for urban households was much larger than for either of the rural nonfarm areas. Thus, in future studies similar to the present one, special attention should be given to sample sizes appropriate for the purpose. Finally, whenever the data would permit, more refined analysis techniques such as analysis of variance and multiple regression could be applied, using some of the variables thus far identified as significantly associated with the extent of the income gap.

REFERENCES

Buchanan, Norman S. and Ellis, Howard S. 1955. Approaches to economic development. New York, The Twentieth Century Fund.

Davis, Joseph S. 1945. Standards and content of living. The American Economic Review 35: 1-15.

Ferguson, C. E. 1966. Microeconomic theory. Homewood, Illinois, Richard D. Irwin, Ind.

Geismar, L. L. and LaSorte, Michael A. 1964. Understanding the multi-problem family: a conceptual analysis and exploration in early identification. New York, Association Press.

Ginzberg, Eli, Hiestand, Dale S. and Reubens, Beatrice G. 1965. The pluralistic economics. New York, McGraw-Hill Book Company.

Groom, Phyllis. 1967. A new city worker's family budget. Monthly Labor Review 90, No. 11: 1-8.

Irelan, Lola M., editor. 1967. Low-income life styles. Washington, D.C., U.S. Department of Health, Education, and Welfare, Welfare Administration, Division of Research.

Kyrk, Hazel. 1944. The income distribution as a measure of economic welfare. Unpublished paper. Chicago, Ill., Department of Economics, University of Chicago.

Kyrk, Hazel. 1953. The family in the American economy. Chicago, Ill., The University of Chicago Press.

Liston, Margaret I. 1964. Profiles of poverty. American Association of University Women 58: 12-14.

Liston, Margaret I. 1966. Management in the family group. Unpublished mimeographed syllabus and sourcebook for Department of Home Management. Ames, Iowa, Department of Family Environment, Iowa State University of Science and Technology.

Longmore, T. Wilson and Taylor, Carl C. 1951. Elasticities of expenditures for farm production and saving, U.S., 1946. Farm Economics 33: 1-19.

Newman, Dorothy K. 1969. Changing attitudes about the poor. Monthly Labor Review 92: 32-36.

Orshansky, Mollie. 1963. Children of the poor. Social Security Bulletin 26, No. 7: 3-13.

Orshansky, Mollie. 1965a. Counting the poor: another look at the poverty profile. Social Security Bulletin 28, No. 1: 3-29.

Orshansky, Mollie. 1965b. Who's who among the poor. Social Security Bulletin 28, No. 7: 3-32.

Orshansky, Mollie. 1965c. Measuring poverty. The Social Welfare Forum. New York, Columbia University Press.

Orshansky, Mollie. 1968. The shape of poverty in 1966. Social Security Bulletin 29, No. 3: 3-32.

Orshansky, Mollie. 1969. How poverty is measured. Monthly Labor Review 92: 37-41.

Ostle, Bernard. 1963. Statistics in research. Ames, Iowa, The Iowa State University Press.

Pennock, Jean L. and Clark, Faith. 1967. Problems in measuring economic variables. United States Department of Agriculture, Agricultural Research Service.

Pounds, Russell G., Lindgren, Herbert and Baker, Harold. 1967. A report of the human resources study. Unpublished multilithed report. Ames, Iowa, Extension Service of Iowa State University.

Projector, D. S. and Weiss, G. S. 1966. Survey of financial characteristics of consumers. Washington, D.C., Bd. of Government of the Federal Res. System.

Schultz, T. P. 1965. The distribution of personal income. Washington, D.C., Joint Economic Committee, U.S. Congress.

Schwartz, Edward E. 1964. A way to end the means test. Social Work 3: 3-12.

U.S. Department of Agriculture. Agriculture Research Service. 1965. Consumer expenditures and income. USDA Consumer Expenditure Survey Report No. 2.

U.S. Department of Agriculture. Consumer and Food Economics Research Division, Agricultural Research Service. 1966. Family Economics Review 1966: 21. March.

U.S. Department of Commerce. Bureau of the Census. 1969. Income in 1967 of families in the United States. Consumer Income Series P - 60, No. 59: 28, 51.

U.S. Department of Commerce. 1963. Do you know your economic ABC? Washington D.C., U.S. Government Printing Office.

U.S. Department of Labor. Bureau of Labor Statistics. 1948. The city worker's family budget. Monthly Labor Review 66, No. 2: 133-170.

U.S. Department of Labor. Bureau of Labor Statistics. 1951. Family Budget of City Worker, October 1950. Monthly Labor Review 72: 52-155.

U.S. Department of Labor. Bureau of Labor Statistics. 1964. Consumer expenditures and income. Survey of Consumer Expenditures BLS Report 237-38.

U.S. Department of Labor. Bureau of Labor Statistics. 1966. Consumer expenditures and income. Survey of consumer expenditures, 1960-61. Bureau of Labor Statistics 237-90, Supplement 2.

U.S. Department of Labor. Bureau of Labor Statistics. 1969. 3 standards of living. Washington D.C., U.S. Government Printing Office.

Weisbrod, B. A. and Hanson, W. L. 1968. An income net worth approach to measuring economic welfare. The American Economic Review 58: 1315-1329.

Williams, Faith. 1930. An equation for measuring the total money value of family living. Journal of Home Economics 22: 483-484.

Zweig, F. 1948. Life, labour and poverty. London, Victor Gollancz.

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Lastly, this study could not have been completed without the support, encouragement and patience of my husband, Tzao Fon Huang.

APPENDIX

Table 17. Cost of one week's food at home estimated for food plans at three cost levels, December 1965 North Central region

Sex-age groups	Low-cost plan	Moderate-cost plan	Liberal plan
	(dollars)		
Families			
Family of two, 20-35 years	16.50	20.20	23.80
Family of two, 55-75 years	13.80	17.00	19.80
Family of four, preschool children	24.10	29.40	34.40
Family of four, school children	27.80	34.00	40.10
Individuals			
Children, under 1 year	3.30	3.90	4.30
1-3 years	4.20	5.00	5.80
3-5 years	4.90	6.00	7.00
6-8 years	5.90	7.20	8.70
Girls, 9-1 years	6.70	8.30	9.40
12-14 years	7.30	9.10	10.70
15-19 years	7.80	9.40	10.70
Boys, 9-1 years	6.90	8.40	9.80
12-14 years	7.90	10.00	11.40
15-19 years	9.40	11.40	13.10
Women, 20-34 years	7.00	8.60	9.90
35-54 years	6.80	8.30	9.60
55-74 years	5.80	7.20	8.30
75 years and over	5.30	6.40	7.60
Pregnant	8.40	10.00	11.40
Nursing	9.70	11.50	12.90
Men, 20-34 years	8.00	9.80	11.70
35-54 years	7.50	9.10	10.70
55-75 years	6.70	8.30	9.70
75 years and over	6.30	8.10	9.30

Adjustments by Area of Residence

From previous surveys of incomes and expenditures of individual and family consuming units, it was known that average levels of income and expenditures differ by areas of residence such as by rural farm, rural nonfarm and urban. Levels of income and expenditure tend to increase with degree of urbanization. At the same time, mean numbers of persons in consuming units decrease with degrees of urbanization. Thus, the use of a single criterion of minimum essential income for all economic units in the present study was not reasonable. Criteria for adjusting the original estimates of minimum essential income, based on the Orshansky formula for urban households of four persons, had to be determined in consideration of comparative income and expenditure levels and size of economic units in the respective rural and urban areas of residence.

Data from the survey of Consumer Incomes and Expenditures for 1960-61 were used to determine the extent to which minimum income requirements, as estimated by this investigator by use of the Orshansky formula, should be adjusted for rural farm and rural nonfarm economic units. Such comparisons could differ by region of the United States. Therefore, data for the North Central Region were used for ascertaining appropriate adjustment factors. These are reported in Table 18. Definitions of the respective types of data are also given.

Since the Orshansky formula is based on the number, age and sex composition of the household, the per capita figures in the lower part of Table 18 were most useful for comparing incomes and expenditures of the three

residential areas. Per capita money incomes before taxes for rural farm and rural nonfarm households were three fourths of the average level for urban units. After taxes, the proportions were 86.7 per cent for farm and 79.1 per cent for rural nonfarm.

Probably, for purposes of the present study, the expenditure comparisons are more relevant than those for incomes. Considering all expenditures for consumption on a per capita basis, farm outlays were about two thirds (65.9%) of those for urban. The comparable percentage was 78.2 for rural nonfarm. When average per capita food expenditures were considered, using urban outlays as a base of 100 per cent, those for the farm area were 73.3 per cent and for the rural nonfarm were 85.8 per cent.

In light of the foregoing comparisons, the present investigator decided to reduce the urban estimates for needed money incomes by 25 per cent for both farm and rural nonfarm households. It was realized that this adjustment might be somewhat low for the farm households and too much for the rural nonfarm group. However, it seemed best to try out his 25 per cent adjustment and, in light of the findings of the present study, next steps should be considered toward determining more appropriate adjustment factors if the present one did not appear reasonable.

Table 18. Comparison of average money incomes and expenditures in rural and urban households, North Central Region, U.S.A., 1960-61[a]

Average money incomes and expenditures	Rural families				Urban families	
	Farm		Nonfarm			
	Amt.	% urban	Amt.	% urban	Amt.	%
No. in household	4.0		3.6		3.5	
Households:						
Money income before tax	$5,372	82.5	$5,101	78.5	$6,505	100.0
Money income after tax	5,156	88.3	4,659	80.3	5,807	100.0
Total receipts[b]	7,470	97.0	5,953	77.1	7,705	100.0
Net change in assets and liabilities	+ 745	276.0	+ 266	98.5	+ 270	100.0
Consumption expenditure[c]	4,372	75.2	4,588	78.9	5,817	100.0
Food expenditures	925	73.3	1,112	88.2	1,260	100.0
Per capita:						
Money income before tax	1,343	75.9	1,417	76.0	1,864	100.0
Money income after tax	1,289	86.7	1,306	79.1	1,699	100.0
Total money receipts[b]	1,860	84.5	1,650	75.0	2,200	100.0
Net change in assets and liabilities	+ 284	101.0	+ 74	26.3	+ 281	100.0
Consumption expenditure[c]	978	64.8	1,163	78.2	1,487	100.0
Food expenditures	245	73.3	1,112	85.8	1,261	100.0

[a]Adapted from: U.S. Department of Agriculture, Agricultural Research Service, Consumer Expenditure Survey Report No. 2, (April 1965); U.S. Department of Labor, Bureau of Labor Statistics, Survey of Consumer Expenditures Report No. 237-85 (June 1964); U.S. Department of Labor, Bureau of Labor Statistics, Survey of Consumer Expenditures, Supplement 2 to Report 237, 90, (June 1966).

[b]Includes money income after taxes, other money receipts, decrease in assets and increase in liabilities.

[c]Includes expenditures for consumption plus those for personal insurance, gifts and contributions.

Excerpts from Interview Instrument Used for

Human Resources Study

Form __G__   Stratum and Segment_____

Interviewer_____   Household No._____

Date _____   Economic Unit Letter_____

IOWA STATE UNIVERSITY
HUMAN RESOURCES STUDY
February 1967

Name of respondent_____   Time interview began_____

Telephone number_____ _____
                Exchange

Does health or physical condition, other than temporary illness, restrict the activity of any household member? Which ones? How much? (CIRCLE APPROPRIATE RESPONSE)

1. No   2. Yes-Somewhat or occasionally   3. Yes-Severely or
                                                 frequently

I will read some statements about people, life, or society, and for each statement will you please tell me whether you AGREE or DISAGREE with it? Think about your own personal experience and give your present opinion. (CIRCLE ONE)

		Agree	Undecided	Disagree
a.	There's little use in writing to public officials because often they aren't really interested in the problems of the average man	1	2	3
b.	Nowadays a person has to live pretty much for today and let tomorrow take care of itself	1	2	3

		Agree	Undecided	Disagree

c. In spite of what some people say,
    the lot of the average man is
    getting worse, not better   1   2   3

d. It's hardly fair to bring
    children into the world, the
    way things look for the future   1   2   3

e. These days a person doesn't
    really know whom he can
    count on   1   2   3

How many different places (houses, apartments, dwelling units, etc.) has the head of household lived in since 1956?_____ (Ecclude military and college residences)

How do you compare your standard of living (considering housing, food, clothes, recreation, etc.) to that of others? Do you think this household is better off or less well off than:

	This household is better off (1)	Same (2)	This household is less well off (3)	Don't know (X)
a. Relatives and old family friends				
b. Immediate residential neighbors				
c. Social friends and acquaintances				
D. Other people in and around-				
(city or town)				

Form E - Determination of composition of economic units   County Zone Segment _____

Interviewer _____

Household No. _____

We would appreciate some information about the people who live in this household. Would you please tell me the name of each adult in the household starting with the head? Name of each child starting with the oldest? [Interviewer: enter each person in col. (1) of table. Then complete the remaining columns for each person listed.]

(1) Name	(2) Relation to head	Sex	Age	Marital status: S M W D	If age 6-18: Highest year of school completed	If age 6-18: In school now? Yes / No	If age 6 or over: Present occupation	Business or industry	If age 18-60: days not worked
1 Head									
2									
3									
4									
5									
6									
7									
8									
9									
10									

Cols. (1) - (4) and (6) - (7) - Self explanatory
Col. (5) - S-Single, M-Married, W-Widowed, D-Divorced or separated
Col. (8) - What is _____'s main job? (Enter housekeeper, student, retired or unemployed, if approriate

Col. (9) - In what type of business or industry is _____ employed? (Enter NA if housekeeper, student , etc.)

Col. (10) - In the last three (3) months, that is, since the _____ (day) of _____ (month), how many work days has _____ not worked full time? (If student, count days of school missed; if house- wife, count days unable to do house work. DO NOT count weekends, holidays, paid vaca- tion, days spent at part time work.)

FORM H   IOWA STATE UNIVERSITY   SEG. NO._____
                                                     HOUSEHOLD NO._____
                          HUMAN RESOURCE SURVEY   SCHEDULE NO._____
                                                     INTERVIEWER_____
                             February 1967   DATE_____

Interviewer Evaluation

3. Condition of dwelling
    1. Sound
    2. Deteriorating
    3. Dilapidated
    4. D.K.

    Do you own or rent? Own_____ Rent_____ (If renting, skip to question 44)

    Does the head of the household own an automobile or a truck with current
    registration and in running condition? 1. No   2. Yes

    How many different organizations do you belong to that
    have regular meetings, such as church groups, labor
    unions, civic clubs, farm or business organizations, Respondent   Spouse
    women's clubs, etc.?   _____/_____
    Your spouse?

    Are the parents of the head of the household (economic unit) presently
    receiving any public welfare or relief assistance?
    CODE
    Y. Not applicable (If parents of head of household are dead)
    X. Don't know
    0. Refused to answer
    1. No
    *2. Yes
    *INTERVIEWER: IF ANSWER IS YES TO PREVIOUS QUESTION, ASK:
    What type of assistance are they presently receiving?_____

    ───

    You have been asked in a previous question about the sources of income
    for this household. Will you please refer to CARD 7 (white) and tell
    me from the list of income categories, the number which corresponds to
    the total amount of money income received by all members of this house-
    hold during 1966? (CIRCLE APPROPRIATE RESPONSE)
    CODE
    X. Don't know   1. 0-$999   3. 1500-1999   5. 2500-2999
    0. Refused to answer 2. 1000-1499   4. 2000-2499   6. 3000-3499

7. $3500-3999	10. 5000-5999	13. 8000-8999	16. 15,000-19,999
8. 4000-4499	11. 6000-6999	14. 9000-9999	17. 20,000-24,999
9. 4500-4999	12. 7000-7999	15. 10,000-14,999	18. over 25,000