FAMILY DEBT PATTERNS AS RELATED TO THE FAMILY LIFE CYCLE AND SOCIOECONOMIC STATUS

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ABSTRACT

FAMILY DEBT PATTERNS AS RELATED TO
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By

Rose Taylor Salsburg

The purpose of this study was to look for family debt patterns as related to stages of the family life cycle and socioeconomic status levels by analyzing the variations in the ratios of debt to income utilizing the components of installment and noninstallment debt.

The debt components were classified by incurrence (purpose for which incurred), type and their respective totals. The dependent debt variables thus formed were: installment, noninstallment and total incurrence variables for each of five purposes--additions and repairs, car, durables, other debt, and medical and dental; totals for installment, noninstallment, and the (grand) total debt.

Family was defined as all persons living in the same dwelling who are related. A single person unrelated to the other occupants or living alone is a separate family.

Installment debt was defined as private, non-mortgage debt subject to two (2) or more regular payments. Noninstallment debt was defined as generally private, non-mortgage debt not subject to more than one payment. The debt measure

(degree of debt) was the ratio of outstanding dollar amount of debt to the family's disposable income.

The source of data for this study was one year (1968: Wave II) of the 1967-1970 panel study on consumer durables and installment debt conducted by the Survey Research Center (SRC), University of Michigan.

The SRC life cycle classification was modified for this study and operationalized into five (5) stages of the family life cycle. The Duncan Socioeconomic Status Decile scale was modified and operationalized into low, middle and high levels of socioeconomic status. The total sample population numbered 1252 families (primary family units).

The noninstallment incurrence variables were eliminated from the major statistical analysis test because of the very small number of families who had debt in this category.

The statistical method used was a two-way analysis of variance (ANOVA). The level of significance was at the .05 probability level. Where there were significant main effects as a result of the two-way ANOVA, a post hoc analysis was made to determine where the significant differences were occurring. The method used was an ANOVA for each possible contrast of levels for the significant variable, socio-economic status (SES), holding the other independent variable, family life cycle (FLC), constant.

The results of the two-way analysis of variance data analysis showed a significant effect of SES levels on the following debt variables: durables installment debt, total

car debt, total installment debt, total noninstallment debt, and the (grand) total debt. The post hoc analysis showed that none of the significant differences were between low and middle levels of SES; but significant differences occurred between low and high SES levels, between middle and high SES levels, or both--depending on the individual debt variable. The basic direction of differences was linear with the largest debt ratio at the low SES level and the smallest ratio at the high SES level. Exceptions were: total installment debt where middle SES level had the largest ratio; and total car debt where middle and high SES levels were almost the same with the smallest ratio.

There was only one significant interaction effect of family life cycle and socioeconomic status. This occurred for total other debt. There were no significant (main) effects from FLC stages.

The results of this study indicate that credit/debt patterns are influenced by SES level. In addition, although FLC stages did not show statistically significant patterns of degree of debt for most debt categories, a pattern was reflected in the frequency distribution.

The interactive effect of stages of the family life cycle and socioeconomic status levels with respect to total other debt may indicate a changing pattern of installment debt from traditional to newer types of credit instruments.

FAMILY DEBT PATTERNS AS RELATED TO THE FAMILY LIFE CYCLE AND SOCIOECONOMIC STATUS

By

Rose Taylor Salsburg

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DEDICATION

To the memory of my mother

To the patience and understanding
of my daughter and son

To the love and inspiration
of my husband

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CHAPTER I

INTRODUCTION

The family has become increasingly accepted as a meaningful and basic unit for the study of economic behavior. Individual disciplines in the social sciences and multi-disciplinary groups more frequently utilize the family as a logical unit of research and study.

An indication of this trend is a recent conference on "Social Structure, Family Life Styles, and Economic Behavior," sponsored by the Institute of Life Insurance at Williamsburg, Virginia, in January, 1972. The participants represented various disciplines, including economics, home economics, sociology, and education. The discussions and presentations, as reported in a volume entitled Family Economic Behavior (Sheldon, 1973), seem to emphasize a needed differentiation from the concept of consumer behavior. Ferber, in his presentation, reinforces the interrelationships of the various disciplines by pointing out that individuals act, not only on economic factors, but also on those which are the focus of the other social sciences including sociology and social psychology. He expresses the need for:

> . . . bringing together these various dimensions of consumer behavior within the framework of the family to provide more realistic explanations of economic behavior (Ferber, 1973:29).

There is a need for more empirical research on family economic behavior to assist families not only in the allocation and use of their economic resources but to gain insight into possible economic problems they may face. Bonde, for example, believes that:

> We know relatively little about many aspects of the problems of consumer credit or the larger field of investigation, family economics.
>
> [We need to look for] answers to innumerable queries regarding consumer credit and other economic problems. The . . . available data, both qualitative and quantitative, both macro and micro, relevant to family economics . . . need to be analyzed, relationships ferreted out, and findings published for appraisal (1967:149).

To reinforce the above-expressed needs in the area of consumer credit, Schlater states that:

> Today, special consideration must be given to credit as a resource. With credit so universal a medium for purchase of goods and services, the need emerges for better understanding of the credit function, of ways in which credit can help individuals and families achieve their goals, and of the factors involved in over-extension of credit use (1970:48).

While there has been a substantial growth in dollar volume and use of credit in recent years, consumer credit in this country is not a relatively recent phenomenon. Morse relates that:

> We have evidence of the use and misuse of credit in the codes or laws reflecting the judgment of society . . . Consumer credit was part of the Colonial family's way of life. Benjamin Franklin's sage advice against borrowing was based not only on his sad experience with uncollectible credit, but on his observations of the use of credit in Colonial America (1967:20).

Although the institution of credit/debt is an old one and the dynamics of debt utilization are constantly changing, the changes have been more radical in the most recent decade. Assessment of the changes and their impact should enable us to understand more fully family economic behavior in general as well as specific areas of family financial management such as consumer credit/debt and the threat of over-extension. There are many facets to debt dynamics, not only quantitative--amounts, ratios, categories--but also societal and institutional--social acceptance of debt, credit instrumentation, and legal consequences.

Available historical data on the use of consumer credit show its tremendous growth. From 1950 to 1970, total consumer credit measured in current dollars rose from $21.5 billion to $127.2 billion--almost a six-fold increase. It continued to climb in the early 1970s reaching $190.1 billion by the end of 1974 (Federal Reserve Bulletin: May, 1975 and October, 1972). Dividing the totals into installment and noninstallment credit shows the proportions of the total and the differences in the growth pattern. Using the same years for comparison as above, 1950 to 1970, installment credit rose twice as fast, from $14.7 billion to $102.1 billion--a seven-fold increase; while noninstallment debt rose from $6.8 billion to $25.1 billion--a three and one-half fold increase. During the same period, the BLS Consumer Price Index rose 61.3 percent.

The Federal Reserve Board subdivides the consumer installment credit into 1) automobile paper, 2) other consumer goods paper, 3) repair and modernization loans, and 4) personal loans. In 1950, the largest component (41.5 percent) was automobile paper; other consumer goods paper was second largest (32.7 percent). In 1970, automobile paper was still the largest, (though not as great in proportion) with 34.5 percent; other consumer goods paper at 30.9 percent was almost matched for second place by personal loans (29.7 percent). Personal loans increased sharply as a percent of the total installment credit during the 20 year period.

Statistics on aggregate trends between 1950 and 1970 indicate not only a rising level of total outstanding installment credit but also a steady increase in the ratio of outstanding installment credit to disposable income (Hendricks, 1973:6; original source: Economic Report of the President, January 1972). The data are consistent with the findings of the Survey Research Center (SRC) Panel Study which found that "outstanding installment debt balances have tended to increase at a much faster rate than income" (Hendricks, 1973:7). In addition, "the upward shift in the debt-income function in the late '60s seems especially significant since it occurred despite rising costs of borrowing which persisted throughout the period" (page 29).

There has been a growing trend toward social and cultural acceptance of the use of consumer credit. Contrasting

an earlier period with the present, Bonde found:

> The attitude toward the use of credit has changed from one of disdain to one of general acceptance. At the turn of the century those who borrowed for personal consumption were considered improvident. This is not so today (Bonde, 1967:148).

Related to social acceptance of credit use is the attitude toward its use. The Survey Research Center has been collecting data on attitudes toward installment debt, its impact and extent of change over a period of time. From its documentation,* it concludes that:

> There can be little doubt that the attitudes of the American people toward buying on credit have become more favorable over the past decade (Hendricks, 1973:138).

The SRC believes that favorable changes in attitudes will continue to be an important force in the growth rate of consumer credit in the 1970s due to several factors including

> . . . the current trend on the part of lending institutions, especially credit card agencies, to grant credit that is not associated with the acquisition of a specific asset (page 156).

Expansion in the area of credit instrumentation--that is, the devices by which debt is made available--has made it easier and faster to obtain credit. Building on the availability of credit through the use of captive credit cards and their revolving credit feature has been the introduction and growth of bank credit cards which have added other "convenience" features such as overdraft checking privileges and

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*For more in-depth coverage of this aspect see Chapter 7 on "Attitudes Toward Installment Debt," in Hendricks et al., Consumer Durables and Installment Debt, 1973:119-144.

cash advances on such cards, various devices for instantaneous or pre-approved cash advances, and "line of credit" form of loans in connection with checking accounts.

The expanded use and, for some, overuse of credit has increased the danger of over-indebtedness. The effects of excessive debt can range from financial overcommitment resulting in the need for professional counseling (Huber, 1965) to complete family disruption, from garnishment to actual personal bankruptcy (Hermann, 1966). In the chapter on "Difficulties With the Repayment of Installment Debt" (Chapter 9) the 1968 Survey of Consumer Finances states:

> It is well known that not only the number but also the proportion of families entering non-business bankruptcy or Title 13* has grown faster than the population. From 1954 to 1967 the number of personal bankruptcies grew from slightly over 40,000 to over 160,000 a year, a fourfold increase, while population increased only 22 percent from 163 million to 199 million (Katona et al., 1969:153).

Although bankruptcy may not be an absolute remedy and is not without risk, the trend is significant.

These various changes in the dynamics of debt utilization make family financial planning more essential, the need for information about credit and credit management more critical, and any resultant problems more complex.

The family uses of credit are many--for large, discretionary expenditures, for unusual or unexpected expenses, to pay old debts or consolidate loans, and to enable a family

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*Title 13 is different from bankruptcy in that the debtor maintains an obligation to repay his debts. This is usually called the Wage-Earners' Plan.

to utilize consumer goods such as cars and household durables while paying for them by adding the cost of credit to the price.

However, a family using credit, whether planned, impulsively, or in an emergency, needs to understand the relationship of credit to income over time. "Although credit makes possible more purchases in the present, it does not increase income but rather borrows from future income" (Gross and Crandall, 1963:477).

The SRC Panel Study points out that "studies of installment debt are less common than studies of expenditures on major consumer durables" (Hendricks, 1973:vi). The limited information available on installment debt is, with a few exceptions, generally in aggregate data form (see above discussion of available statistics), or is cited as a contributing factor to a problem but not measured separately by categories of use or type. Noninstallment debt information, the little that is available, is classified by source, that is, single-payment loans, charge accounts, service credit from the perspective of the family unit. Data on noninstallment debt have been rarely, if at all, analyzed.

What are the family patterns of use? Where are the debt burdens likely to be? An empirical investigation seems worthwhile undertaking and would be of value.

There is insufficient data analysis regarding the extent to which debt utilization is related to stage of the

family life cycle and socioeconomic status. This lack leaves a gap in the understanding of family debt behavior or credit utilization, limiting the generalizations that can be drawn and thus limiting the ability of the profession to make predictions about this area of behavior.

Theoretical Framework

The concept of stages in the family life cycle has been used as an important tool for analysis in social research. It offers a useful framework for providing empirically-based information. Its use for this study is based on two related theories. The first postulates that variations in income and expenditures follow basically characteristic patterns as a family progresses through the stages of the life cycle and at each stage there are a number of characteristic financial problems (Bigelow, 1931). The second postulates that at each stage of the life cycle there are developmental tasks or growth responsibilities, "the successful achievement of which leads to satisfaction and success with later tasks" (Duvall, 1967:49). One of the basic tasks of families is the allocation of resources, including allocating money resources for various needs and costs. Lack of satisfactory handling of this task at any stage can cause disorganization at future stages. This is particularly important in the early family stages (Duvall, 1967).

The concept of socioeconomic status is a "composite of social and economic attributes that tend to cluster together"

(Kahl and Davis, 1955:321); it has been used by social scientists as a "significant variable in measuring and comparing behavioral traits" (Lawson and Boek, 1960:149). It is generally believed that living patterns, attitudes and goals, as reflected in an individual's or family's use of resources, for example, money income, are influenced by his status group (Gross and Crandall, 1963:192).

Research in family economics in general, and the management of its credit resource in particular has not fully utilized this concept. For example, Brown states: "Motivations for family economic behavior are complex and varied, and we can be sure that economic motives are not the only critical ones. A family's position in the social structure creates certain orientations which are undoubtedly reflected in spending patterns" (1969:127).

Definitions

The term credit when used in this thesis means consumer credit--that is, private, non-mortgage, short- and intermediate-term credit of the family unit or household. Individual and family credit--that is, private, nonpublic, nonbusiness credit--has been traditionally labeled "consumer credit" to differentiate it from "business credit." In addition, the terminology of consumer credit is interchangeable with consumer debt--the former having a more positive connotation, the latter, a negative one. Hereinafter, the terms consumer credit (debt) and credit (debt) will be used interchangeably.

Debt patterns for this study refer to incurrence and type.

a. Debt incurrence is debt classified by purpose for which incurred, that is, additions and repairs, car, durables, "other" debt, and medical and dental.

b. Type of debt is debt classified as installment or noninstallment.

The SRC Panel Study defines installment debt as private, non-mortgage debt subject to two or more regular payments. Noninstallment debt is generally private, non-mortgage debt not subject to more than one payment. (See Chapter III, "Methodology," for more specific and complete operational definitions.)

Degree of debt is the term referring to the dependent measure, debt to income ratio.

The family unit means all persons living in the same dwelling unit who are related by blood, marriage, or adoption. A single person unrelated to the other occupants in the dwelling unit or living alone is a separate family unit.

Stages of the family life cycle is a construct representing succeeding patterns of family composition and age in the life of a family, by which families are placed in numbered stages.

Objectives

The purpose of this study is to analyze the variations in the ratios of debt to income for the components of installment and noninstallment debt in relation to stages of the family life cycle and socioeconomic status, for the year 1968, to determine if debt patterns exist, and to interpret the findings in respect to implications for family financial management. (The year 1968 is taken from the 1967-1970 SRC Panel Study, see Chapter III below.)

The determination of whether discernible debt patterns exist would be an important contribution to family economic research. An understanding of the existence and nature of family debt patterns, as they may relate to family life cycle and socioeconomic status, empirically supported, can be used by counselors or educators to help families in their financial management, in a preventative planning approach to anticipate needs, and hopefully to ease or prevent possible overindebtedness from occurring.

The specific objectives of this study are to:

1) extend the Survey Research Center's analysis of total installment debt by disaggregating it into categories of purpose for which the debt is incurred,

2) seek new information on noninstallment debt use and degree of debt,

3) add empirical information on debt patterns to the growing body of behavioral information based on the family life cycle concept,

4) explore the usefulness of the socioeconomic status concept in the family economic behavior area specifically through credit/debt utilization and management, and to

5) identify possible debt burden areas.

Hypotheses

The specific hypotheses to be tested for the effect of stages of the family life cycle and socioeconomic status levels on family debt patterns are as follows:

I. The degree of debt (ratio of debt to income) will vary for each of the debt incurrence categories both for the installment incurrence debt group and the total incurrence group.

A. Stages of the Family Life Cycle

1. Additions and Repairs

From Stage I to IV, the ratio will increase, peaking at IV, then declining with V.

2. Car

Starting at a relatively high level, the ratio will increase to its peak at Stage II and slowly decline with V being lower than I.

3. Durables

The same pattern will emerge as with Car.

4. Other

Starting low at Stage I, the ratio will peak quickly at II, then decline to its lowest level at V.

5. Medical & Dental

   Starting low at Stage I, the ratio will peak quickly at II, decrease slowly through III and IV, then increase slightly at V (bimodal).

B. Levels of Socioeconomic Status

1. Additions & Repairs

   A linear pattern will emerge, with the largest ratio at the Low level and the smallest at the High level.

2. Car

   An inverted uneven V pattern will emerge, with an intermediate ratio at the Low level, the largest ratio at the Middle and the smallest ratio at High.

3. Durables

   The same pattern will be found as in Additions & Repairs.

4. Other

   A linear pattern will emerge, with the smallest ratio at the Low level and the largest ratio at High.

5. Medical & Dental

   An inverted uneven V pattern will emerge, with the smallest ratio at the Low level, the largest at the Middle and intermediate ratio at High.

C. Interaction

There will be no interactive effect between family life cycle and socioeconomic status.

II. The degree of debt will follow the same patterns for the three types of total debt--installment, noninstallment and (grand) total--with respect to family life cycle and socioeconomic status.

A. Stages of the Family Life Cycle

Starting at a moderate ratio, the ratio will increase to its peak at Stage II and slowly decline to its smallest ratio at V.

B. Socioeconomic Status Levels

A linear pattern will emerge, with the largest ratio at the Low level and the smallest ratio at the High level.

C. Interaction

There will be no interactive effect between family life cycle and socioeconomic status.

CHAPTER II

REVIEW OF LITERATURE

The first empirical study of consumer finances using stages in the life cycle as the independent variable rather than age classifications was by Lansing and Morgan (1955). Their data analysis of income, assets and debts, and selected expenditures included the findings that the wife's income was the factor which accounted for the bimodality of family income, young marrieds were buying relatively large amounts of durable goods when income was fairly low, and the proportion of families with debt reached a peak for young families with children and did not drop substantially until the children left home. In addition to showing that the family life cycle is related to important economic behavior variables, they mention the possibility that many of these patterns are culturally and socially determined, and suggest further research in this area.

Lansing and Kish (1957) found the stages of the family life cycle to be of greater explanatory value than age classes (as measured by the variance using rho) in six economic characteristics including indebtedness, income level, purchase of several major budget items, and employment of wife.

Shaffer's (1964) findings in analyzing Survey of Consumer Finance data for income and expenditure patterns related to the life cycle point up possible trouble spots: the need for awareness of the implications for financial planning when the wife leaves the labor force after working; heavy expenditures for durable goods in the young, married, childless stage; indications that many families have risky financial positions because of poor money allocation, extensive use of mortgage and consumer credit, inadequate preparation for possible current income reduction and life insurance programs inconsistent with needs, especially with younger children.

Analysis of data in the Kahl and Davis study (1955) showed the best single index of socioeconomic status to be an occupational scale. In addition, they said "observation suggests that the core of status is a culturally defined, group-shared style of life" whose resultant values and mode of living influence expenditure patterns (p. 322).

One study by Mathews and Slocum (1969) found that membership in a social class influences patterns of credit card usage: "The lower classes tend to use their credit cards for installment financing to a greater extent than upper classes" (p. 72). (The other classification for card use was convenience.) In a later study (1970), in which they compare social class and income as indicators of consumer credit behavior, they believed their findings showed that income is also a useful variable to use for understanding credit

behavior. In addition, the data indicate "that social class does not significantly differentiate credit behavior within all income categories; however, social class does appear to be a valid segmentation variable in the upper income categories" (p. 71).

In a study of 100 financially overextended families in the Detroit metropolitan area, the sample (not random) had been solicited from professional counseling sources. Huber (1965) statistically compared the problem group with the general population of metropolitan Detroit (based on the 1960 census) in many areas--including education, income, occupations, number of working wives, age of head of household and number of years married--for possible clues to the problem family's indebtedness. He found much similarity between the two groups; one exception was that the income of black families in the problem group were a little below white families in the study and considerably better than in the local community as a whole. He believed their income level identified them more with the "installment credit problems of 'our' middle-class population as a whole than those peculiar to the low-income Negroes like Caplovitz's The Poor Pay More" (p. 18).

Further analysis of the overextended families of the study showed that in the employment area, 50 percent of the families reported declining incomes, a third of which were considered drastic drops, a third reported rising incomes and the balance fluctuating ones. This would seem to indicate

that many families face changing income and for heavily debt-committed families the budgetary readjustments are hard to make. Age-wise, over a third of the study's heads of family were 34 year olds or less compared to a fourth in the metropolitan area. Huber states, "It is to be expected, however, that a study of overextended families would tend to consist of younger families in view of the peculiar high-cost demands associated with starting a home and a family" (p. 20).

Another finding pointed up the crucial early years of marriage; the couples of the study designated the early years of marriage as the time when their financial problems began, 29 percent indicating money problems from the beginning of marriage. Other reasons given for debt problems were current overbuying, overuse of "easy credit" especially for high cost durable items due not only to impulsiveness and impressionability but also to lack of discriminating consumer information, no planning ahead for future needs, and neither savings nor insurance protection programs for emergencies.

Herrmann (1966) in a survey of studies of families in bankruptcy (Brosky, 1965; Dolphin, 1965; Herrmann, 1965; Myers, 1961) found that certain characteristics may have predisposed bankrupts to financial difficulties. Among these were: (1) youth and lack of financial experience, (2) the heavy expenses for families in the first stages of the family life cycle, (3) income declines which interfered with debt-carrying capacity, (4) unanticipated expenses such as major illness, accident, and other unexpected misfortunes--debts

from medical services constituting one of the major categories of debt in all four studies, and (5) total debt loads which had grown to unmanageable size--this accumulation (usually a gradual process) appearing to be the principal cause of the financial distress.

The majority of the bankrupts in these studies were found to be married men in their early 30s or younger, working in blue-collar occupations, whose incomes were typically lower than those of other families in their community.

The Survey Research Center completed a four-year panel study (1967-1970) entitled "Consumer Durables and Installment Debt: A Study of American Households" (1973). This survey parallels the annual "Survey of Consumer Finances" (SRC) for those years in that a national cross-section of primary family units were interviewed and the same questionnaires were used for data-gathering. One major difference, however, was that for the panel study, the interviews were repeated each year with as many of the original families from the first interview as could be located or responded.

As indicated by the study's title, installment debt is one of the two major dependent variables on which the analysis of this volume focuses. The thrust of its direction is in looking for aggregate trends. The SRC used an estimate of average outstanding installment balances in its analysis. This estimate was obtained by summing the total outstanding installment debt for each of the four interview years and dividing by four. A four year average annual income (grouped

into income classes) was frequently used as a major variable.

Its findings on the pattern of average levels of outstanding debt across income groups were:

> For families with an income less than $10,000, installment debt balances grow with income. Throughout this range installment debt is a constant proportion (about 12 percent) of income, except at the very bottom of the income distribution. At incomes above $10,000 but below $20,000 a year, outstanding installment debt is almost a constant amount, and hence declines rapidly as a proportion of income. At very high levels of income, $20,000 or more, installment debt balances begin to decline, not only relative to income but also in absolute amount (p. 153).

A look is taken at demographic correlates of income including stages of the family life cycle. It was shown that the use of installment debt is strongly influenced by family life cycle and its components. But overall they conclude that controlling for these does not change the basic relationship of installment debt to income.

Attitudes toward installment debt were explored. For this a debt attitude index was devised to reflect attitudes toward using debt. Not only do attitudes strongly affect installment debt use, but the variable change in attitudes among panel families had a statistically significant impact on debt use. They also assessed the impact of family characteristics including family life cycle and found that "attitudes of families at different stages of the family life cycle differ considerably" (p. 132).

"Even after taking account of other factors which influence installment debt use, the impact of attitudes on outstanding balances is striking" (p. 134).

Ryan's study (1968) sought "to ascertain and measure factors associated with excessive installment debt burdens and to identify economic and demographic characteristics of the excessively indebted." Debtors were classified according to debt burden using the ratio of installment debt payments to income, income level and liquid asset holdings. Those whose liquid assets exceeded debt by at least $200 were not considered in trouble. The remainder were considered excessively indebted and classified as in some trouble (ST) or as in deep trouble (DT), the latter being a subgroup of the former. Those in the DT subgroup were debtors with 40 percent debt payments to income ratio, and those with 20-39 percent debt ratio but with disposable income under $4000. The ST group consisted of debtors with 20-39 percent debt ratios with disposable income of $4000 or more, and those with 10-19 percent ratios with income less than $6000. Thus "40 percent of the debtors were classified in some trouble with respect to installment debt" (p. 64).

Some of Ryan's findings were: laborers, service workers, unemployed (whether of short or long duration) and the retired were above average in the likelihood of experiencing debt trouble; and, the greatest proportions of debtors, of varying degrees of seriousness, were among the unmarried, the poor, and those under 25 years of age, or 65 years or older.

Her life cycle analysis showed that under 45 years old, those "married with no children" had the highest percent of

overburdened debtors, closely followed by the "unmarried, no children" stage (which was less than 5 percent of the sample). The highest percentages were found among those over 45 years old, then the "ummarried," closely followed by "married, no children, head retired."

In their chapter on "Installment Credit in Perspective," Moore and Klein (1967) review and summarize data on borrower characteristics from which they conclude:

> The use of installment debt has increased sharply in all income groups since the mid-thirties, but more so in the middle and upper income range than in the lower groups (p.20). . . . and,
>
> . . . there has been a substantial increase in recent decades in the incidence of both installment and non-installment debt among all income, occupation, and age groups. The over-all increase is indeed more striking than the redistribution among income, age, or occupation groups (p. 31).

They also note that installment debt, automobile paper, the latter's largest component, and total consumer debt, "have all grown at a faster rate than either personal income or total sales of durables" (p. 4).

Mandell's report on Credit Card Use in the United States (1972) contains some interesting findings relevant to the debt function of credit card use and the resultant effect on the debt pattern.

Data for this study, collected through the Survey Research Center, found four "major" determinants of credit card use--level of family income, education of the family head, age of the family head and family life cycle stage, and size and location of the community. His data on occupational

credit card use shows the higher occupational status categories of "professional, technical and kindred workers," and "managers, officials" having a higher percent of use (80 percent and 72 percent respectively), while the "laborers and service" category with 36 percent and "operatives" with 42 percent are at the low end.

Regarding the family life cycle findings, Mandell reports:

> . . . families who have the greatest need and make the greatest use of credit cards, both in terms of expenditures and credit features, are young families with children at home (p. 13) . . . and,
>
> . . . They realize that their needs are greatest at this age and life cycle situation and so they borrow against their expected higher future levels of income. Therefore, these families are not only the greatest users of credit cards, but also the greatest users of the credit aspect of the cards (p. 17).

In analyzing those who use the credit/debt feature of their credit cards, Mandell notes that there are two possible methods of repayment: 1) "pay as soon as you can;" and 2) pay the debt off a little at a time, "analagous to installment debt" (p. 90). Of those families using the credit feature, "slightly more than half treat their debt as an installment type of loan" (p. 90). The first repayment method is most likely to be used by older families, those with higher income, and the more highly educated. Those most likely to use the second repayment method are younger families with heads under 35 years of age, and those earning less than $10,000 per year. In view of the large number of credit card users who use their cards as a credit instrument, he

hypothesizes that "some credit card users are substituting credit card debt for the more traditional installment debt paper" (p. 95).

The data show that an increasing proportion of the population with credit card debt is at the middle and higher income levels.

Mandell concludes, from part of the data analysis:

> . . . the addition of credit card debt to other types of non-automobile and non-mortgage debt does tend to change the patterns of debt distribution in the population (p. 99).

He notes, however, that the sizeable change occurs among the wealthier families. This may partly be offset by heavier use of the "pay as soon as you can" repayment method.

Brown's (1969) research defined social class as a "population segment identified by occupational class with income held constant" (p. 128), and tested for social class behavior differences in broadly defined family investment categories using a stratified sample by income class. The category "human capital" included education and medical care while the "consumer durables" category included household durables and automobile. (The third category, "financial equities and real property," included personal insurance and net change in assets and liabilities.)

She found the following differences among social classes:

> White collar classes invest more in education, medical care and insurance than blue collar families of the same income [while] . . . Unskilled workers . . . show a preference for household durables (p. 133).

No relation was found between social class and spending on autos. She concluded that the results indicate a "need to consider social as well as economic explanations for the financial activities of families" (p. 136).

The marketing study by Martineau (1958), considered a classic in its field, was conducted in Metropolitan Chicago and tested the relationship of social-class membership to spending behavior, including purchasing patterns and spend-save aspirations. Social class was operationalized using the part of Warner's Index of Status Characteristics based on occupation, source of income, and housing type with the weighted scores converted to social class level. (The full ISC includes dwelling area as a factor, but provides for a weight adjustment where missing.)

His study showed "a social-class system operative in a metropolitan area" and "class membership is an important determinant of the individual's economic behavior" (p. 125).

In addition, he states,

> There is certainly a rough correlation between income and social class. But social class is a much richer dimension of meaning. There are so many facets of behavior which are explicable only on a basis of social class dynamics (p. 125).

Wasson (1969) presents some analysis he made of U.S. Department of Labor, Bureau of Labor Statistics data (BLS, "1960-61 Survey of Consumer Expenditures," and "1964 Supplemental" study) which show that occupational classes cut across income groups and "Occupational class, not income . . .

determines the proportion of spending allocated to some . . . important categories" (p. 235). He contends that this data analysis reinforces Martineau's early 1958 study of the value of social class over income class for market segmentation and concludes:

> . . . market segmentation is influenced strongly by a complex of cultural influences, of which occupation and the other elements of social class are important components (p. 238).

He admits that occupation is not the only cultural factor, but believes the BLS data "demonstrates the need" to look at "occupation first, and only then at income level" in marketing studies (p. 238).

CHAPTER III

METHODOLOGY

Data Source

The source of data for this study is a four-year panel study (1967-1970), undertaken in survey form, by the Survey Research Center, Institute for Social Research, at the University of Michigan, Ann Arbor, Michigan. This study, entitled "Consumer Durables and Installment Debt: A Study of American Households," paralleled the annual "Survey of Consumer Finances" conducted by the Survey Research Center for those years in that a national cross-section of primary family units were interviewed and the same questionnaires were used for data gathering. One major difference, however, was that for the panel study, the interviews were repeated each year with as many of the original families from the first interview as could be located or who responded. Another difference was that families with heads aged 60 or older were excluded from the panel in the initial interview.

While the SRC's analysis of the panel data is related to total installment debt, the data base is broader in scope and allows for other analyses. Data are available to classify both installment and noninstallment debt by the purpose for which the debt was incurred. The SRC study,

therefore, provides an opportunity to obtain empirical data to analyze both types of debt as well as total family debt.

This study will utilize the data from one year of the panel study. The plan is to look for patterns, not trends or averages; this can be done using one year's data. The year 1968 (designated Wave II, i.e., second year, by SRC) has been chosen for analysis for two reasons:

1. one of the independent variables, socioeconomic status, is most accurately coded for 1967 and 1968 because only in those years was it obtained by direct question;

2. the year 1968 was chosen over 1967 because use of the later year permits correction or resolution of inconsistencies or ambiguities that may arise in the earlier interview when data on the same families are available for more than one interview.

Procedures for Sampling and Data Collection

The SRC samples represent cross-sections of the mainland United States population, excluding Alaska, living in private households. Excluded are transients, residents of institutions, and persons living on military bases. Household refers to dwelling unit, the basic unit for sampling. "The method known as multistage area probability sampling is used to select a sample of dwelling units representative of the nation" (Katona, et al., 1969:235).

The SRC has had extensive experience in researching family economic behavior as well as many years experience in survey methods. It maintains a nationwide staff of interviewers who are selected and trained by traveling supervisors. "The interviewers are instructed in the careful and uniform use of the fixed-question open-answer technique. . . . Many questions are answered in the respondent's own words, which the interviewers record verbatim (or as nearly verbatim as possible). Nondirective probes are used to clarify the answers received" (Katona, et al., 1969: 236).

In early 1967, the SRC initially interviewed a national cross-section of 2,604 primary family units whose heads were under age 60. The interviews were repeated each year, with the final interview early in 1970. Each year's interview was conducted during the first quarter of the year. The four annual interviews were held at intervals of approximately twelve months with those families who could be located or who had responded. On the fourth round, a panel of 1,436 families remained.*

The questionnaires for each of the waves of interviewing are very similar but do have some differences.**

The time frame of the data was as follows:

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*Data from this SRC Panel Study are available in the form of a merged four year family tape. Hence, any year's analysis would be for those families that completed all four years of interviewing.

**The questionnaire for Wave II (1968 year) is reproduced in the 1968 Survey of Consumer Finances, (1969) Chapter 15, pp. 245-279.

1. The annual or disposable income was for the previous year (e.g., for Wave II, the 1968 year, the disposable income was for the year 1967).

2. The amounts and types of debt were at the time of interview.

The data collection, preparation, editing, coding and re-editing were carefully supervised and coordinated by experienced professionals throughout the various survey operations until the final documentation and archiving of the data in 1971 (Hendriks, et al., 1973:vii).

Study Design and Operational Definitions

The purpose of this study is to look for family debt patterns as related to family life cycle stages and socio-economic status levels by analyzing the components of installment and noninstallment debt.

Nominal definitions for design of this study are:

Family Unit - "All persons living in the same dwelling unit who are related by blood, marriage, or adoption." A single person unrelated to the other occupants in the dwelling unit or living alone is a separate family unit.

Debt Patterns include debt incurrence and type of debt. Debt incurrence is debt classified (in five categories) by purpose for which incurred:

1. Additions and Repairs
2. Car
3. Durables

4. Other debt (e.g., other major transactions, travel)

5. Medical and Dental

Type of debt is classified as installment or noninstallment.

Independent Variables

The independent qualitative variables are stages of the family life cycle (FLC) and socioeconomic status levels (SES).

Stages of the Family Life Cycle

The complete Survey Research Center classification contains ten life cycle stages in its panel study. Following review of a frequency distribution of extracted raw data, it was found that the two "retired head" stages had a very small number of family units. Therefore, these two stages were combined with the equivalent stages with "head in labor force" and the number of stages was reduced to eight.

Further analysis of the extracted data following the initial change showed the number of families at each stage of the FLC was not large enough for meaningful analysis, particularly at the early stages and the "any age, single with children" stage even if adjustments of the socioeconomic levels were made.

The SRC Life Cycle classification was modified and operationalized in this research study as follows:

Under Age 45

Stage I - Unmarried, no children and
Married, 2 or more adults, no children

Stage II - Married, 2 or more adults, youngest child under 6

Stage III - Married, 2 or more adults, youngest child 6 or over

Age 45 or over

Stage IV - Married, 2 or more adults, children at home

Stage V - Married, 2 or more adults, no children* and Unmarried, no children

*(The term "no children" means no children under 18 living at home.)

These changes, primarily collapsing to fewer levels, were made in the most homogeneous manner thought possible. For the same reason, the stage "any age, unmarried, has children," the most heterogeneous and one of the smallest groups (65 families), was eliminated from the final operational structure.

Socioeconomic Status Levels

The SRC panel study classifies families by socioeconomic status using the Duncan socioeconomic index ratings.

> Dr. O. Dudley Duncan used the percent 'Excellent' or 'Good' ratings for the ninety titles of the 1947 NORC [National Opinion Research Council] prestige study as the criterion for the derivation of a regression equation expressing the criterion as a linear function of income and education. He based the two regression weights on age-specific education and income patterns and sub-classified some large occupation groups by industry to get more precise SES ratings for detailed occupational

titles from the 1950 census data for the civilian male population* (Scheffler et al., ed., 1971:5).

SRC coding is available for three Duncan score ranges: 1) from 00-96; 2) decile scale; and 3) scores bracketed into 19 categories of five-score ranges. The original intent was to use the Duncan Decile Scale which has a range of 0-9. It divides the entire experienced labor force of 1950 (the population Duncan used to derive his socioeconomic scores) into tenths according to the socioeconomic scores of their occupations. The tenth of the labor force who worked in occupations with the highest socioeconomic scores were assigned the decile scale score of 9. The tenth with the lowest scores were assigned a score of 0.

A raw data frequency breakdown showed a small number of family units at several of the SES levels, and the ten levels were collapsed to five. A further analysis of the data, extracted in tabular matrix form, showed the number of families per cell using five SES levels was not sufficient for meaningful analysis. The low end of the SES range had the smallest frequencies, so the ten levels of the Duncan Decile scale were regrouped and operationalized for this study as follows:

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*The background and development of the Duncan SES index is contained in Occupation and Social Status, by Albert J. Reiss, Jr., Chapters VI-VII, pages 109-161, and Appendix B, Table B1, pages 263-275, by Otis Dudley Duncan.

Low level - The range from 0 through 3,

Middle level - The range from 4 through 6,

High level - The range from 7 through 9.

This provided a 5 by 3 matrix with 15 cells. The table below (Table 3.1) shows the distribution of the study sample population for each of these cells.

Table 3.1. Frequency Distribution: Total Sample Population by Family Life Cycle Stage and Socioeconomic Status Levels (N=1252)

Socioeconomic Status Levels	Family Life Cycle Stages					
	I	II	III	IV	V	Row Total
Low	22	84	45	76	76	303
Mid	11	102	69	58	68	308
High	64	180	116	142	139	641
Column Total	97	366	230	276	283	1252

Dependent Variables

The dependent variables are formed by classifying the components and totals of installment and noninstallment debt.

The following SRC definitions utilized for this study delineate the scope of the data:*

*These have been taken or summarized primarily from Consumer Durables and Installment Debt and supplemented from working papers provided the author by SRC.

Installment Debt - All private, non-mortgage debt of the family unit (or household) which is subject to two or more regular payments regardless of timing. Thirty-day charge accounts and transactions in which the purchaser promised to pay within thirty days are not included, but revolving charges and open-ended accounts owed to a store on which a set amount is supposed to be paid regularly are included.

Total Outstanding Installment Debt - The dollar amount of outstanding debt owed by the family on the day it was interviewed.

Non-Installment Debt - Private, non-mortgage debt that is owed to a financial or commercial institution which is not subject to more than one payment (even though, despite the original agreement, the debtor may make more than one payment) and all debt owed to individuals or non-financial or non-commercial institutions (such as a hospital or school).

Total Outstanding Non-Installment Debt - The dollar amount of debt owed at the time of the interview.

Debt Exclusion - Debt incurred for groceries, utility bills and taxes; debt incurred for business and investment purposes.

Annual Income - Total family income after the deduction of estimated federal income tax liabilities, hereinafter called Disposable Income.

All debt is outstanding debt (as different from monthly or annual debt) and hereafter the word "outstanding" is

assumed without being repeated for each debt variable.

Thus the dependent variables are:

Installment debt for each of the five categories of debt incurrence and their total --

Additions and Repairs installment debt

Car installment debt

Durables installment debt

Other installment debt

Medical and Dental installment debt

Total installment debt

Noninstallment debt for each of the five debt incurrence categories and their total --

Additions and Repairs noninstallment debt

Car noninstallment debt

Durables noninstallment debt

Other noninstallment debt

Medical and Dental noninstallment debt

Total noninstallment debt

Total incurrence debt (installment and noninstallment) for each category --

Total Additions and Repairs debt

Total Car debt

Total Durables debt

Total Other debt

Total Medical and Dental debt

Total Debt - (the grand total) is the sum of total installment debt and total noninstallment debt.

The debt dependent variables are operationalized by calculating a ratio of outstanding dollar amount of debt to the family's disposable income arriving at the "degree of debt," the term used for this debt measure. This gives the percent of debt for each of the debt variables.

The reason for using this debt-to-income ratio as the dependent debt measure is to assess the comparative impact of the degree of debt by adjusting out the income differences.

Procedures for Analyzing the Data

The data were analyzed using the Michigan State University computer facilities. The various descriptive and statistical analyses were carried out primarily utilizing the SPSS: Statistical Package for the Social Sciences (Nie et al., 1975) programs, and were run on a Control Data Corporation (CDC) 6500 computer.

Following the preliminary analysis discussed in the operational definitions above (page 31), the sample population was separated into two groups: those with debt, and those without debt. A frequency distribution was obtained for each debt variable giving the number of families (N) in each cell, the number of families in each cell with no debt (N') and the percent of families in each cell that had no debt (i.e., without debt) N'/N.

The with debt group was statistically analyzed, where possible, with the two-way analysis of variance test using the degree of debt measure (debt to income ratio). The "F"

ratio was the basis for testing for significant differences and the .05 probability level was used for significance and for acceptance or rejection of the hypotheses. The additional descriptive statistics obtained were the cell, row, and column means, and the grand mean.

Utilizing the statistical breakdown, a table of means was compiled for each variable which showed a significant interaction or main effect. Where there was an interaction, the means were graphed to look at the interactive effect. From the tables, a comparison of marginal means was made, and for the significant variables an examination could then be made of the cellular differences.

A post hoc analysis was made for those variables whose main effect "F" ratios were significant at the .05 level or better to determine where the significant differences were occurring. An analysis of variance statistical test was made for each possible contrast of levels for the significant independent variable holding the other independent variable constant. This method is not applicable to a two-way interaction; hence the analysis was computed for main effects only.

The original intent was to use the analysis of variance statistical method for each of the dependent debt variables to look for possible interaction between life cycle stages and socioeconomic status levels, and if there was none, to look at the main effects and determine where any of the significant differences were.

There was a wide range, sometimes sizeable, of the N or number of families in the with debt subpopulation for each debt variable. In some cases the number was extremely small. This imposed a severe restriction on completing the two-way analysis of variance (ANOVA) statistical test across all levels and stages of the independent variables. For the test, there must be at least two (2) per cell or five (5) per level to get a meaningful analysis. Therefore this statistical test had to be limited to those debt variables that met this criteria--at least at most levels. Thus the group of noninstallment debt incurrence variables had to be entirely eliminated from this method of analysis.

In addition, not all of the ANOVA tests on the remaining debt variables were able to include all stages of the family life cycle but do include all levels of socioeconomic status. All stages of the family life cycle were included in the ANOVA statistical test with the following exceptions:

1. Missing FLC stage I only are

   Addition and Repairs installment debt
   Durables installment debt
   Total A and R installment debt
   Total Durables installment debt

2. Missing FLC stages I and V are

   Medical and Dental installment debt and
   Total Medical and Dental installment debt.

CHAPTER VI

FINDINGS AND DISCUSSION

Frequency Distribution

Since the number of families having debt for the different incurrence and type categories varied considerably and the incidence of no debt was predominant, it was believed that a frequency distribution of the total sample population for each debt dependent variable using the no debt classification would be meaningful.

This series of tables gives:

1. The number of families (N) of the total sample population who are cross-classified in each cell, i.e., in a particular family life cycle (FLC) stage at a given socio-economic status (SES) level. For example, 22 of the sample families are FLC stage I and at the low SES level (I/L);

2. The number of those families in a cell having no debt (N') for each named debt variable; and,

3. The ratio of the number of families in the cell with no debt (N') to the number of sample families in that cell (N) expressed as a percent.

The number and percent for the families with debt can be obtained by subtraction.*

The individual frequency distribution tables can be found in Appendix A, Tables A.1 - A.18.

The frequency distribution tables are summarized by debt groups. The pattern of the individual incurrence debt variables (additions and repairs, car, durables, other and medical and dental) for the installment, noninstallment, and total debt groups are compared to the relevant total. The results are shown in Tables 4.1 - 4.3. In addition, the totals for type of debt are summarized in Table 4.4.

For each of these incurrences, the FLC stage and SES level where both the highest and lowest percent of families with no debt occurs is shown in order that patterns, if any, can readily be discerned.

In the installment incurrence group, a pattern can be seen among families in the highest percent of no debt and in the lowest percent of no debt for both family life cycle (column totals) and socioeconomic status (row totals).

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*For example, the number of families (N') having no car installment debt was 749, or 59.8 percent of the total N (1252). Therefore, 503 or 40.2 percent had car installment debt.

Table 4.1. Installment Debt: Percent of Families With No Debt (Tables A.1 - A.6)

Installment Variable	FLC Stages		SES Levels#	
	Highest	Lowest	Highest	Lowest
Additions and Repairs	I	IV	L	M
Car	V	I/II*	L	M
Durables	V	II	H	L
Other	V	II	L	M
Medical and Dental	V	III	L	M
Total Installment	V	II	L	M

*The difference between the stages is only 0.4 percent.
#L-low; M-middle; H-high

A pattern emerges where the percent of no debt for the FLC is highest at stage V and lowest at stage II; for the SES, it is highest at the low level and lowest at the middle level. Except for the lowest percent related to FLC, the patterns are strong. Exceptions to this pattern occur for several of the incurrence variables.

Because of the strong general pattern shown by the highest and lowest percent of no debt families in relation to FLC and SES among the individual installment incurrences it is not unexpected that the percent of families with no total installment debt follows a similar pattern.

The frequency distribution of no debt for noninstallment debt incurrences also has a pattern--but it is not as strong as in installment debt incurrences:

Table 4.2. Noninstallment debt: Percent of Families With No Debt (Tables A.7 - A.12)

Noninstallment Variable	FLC Stages		SES Levels	
	Highest	Lowest	Highest	Lowest
Additions and Repairs	V/I**	II	M	H
Car	I	III/II**	M	H
Durables	I/V*	II	H/L***	M
Other	V	I	L	H
Medical and Dental	V	III	M	H
Total Noninstallment	V	III	L/M*	H

*Both have the same percent
**The difference is 0.6 percent
***The difference is 0.1 percent

The most consistency is found at the lowest percent of no debt for SES. This is at the high level with one exception--durables, where it is at the middle level. There are tendencies in other areas. The highest percent of no debt most frequently occurs at the middle level of SES, but with some exceptions. For FLC, the lowest percent of no debt is generally at stage III or stage II except for other; and the highest percent of no debt tends to be found mostly at stage V.

Total noninstallment debt normally follows the majority pattern but reflects the diversity of the individual non-installment incurrences.

The total incurrence debt group is fairly consistent:

Table 4.3. Total Incurrence Debt: Percent of Families With No Debt (Tables A.13 - A.18)

Total Variable	FLC Stages		SES Levels	
	Highest	Lowest	Highest	Lowest
Additions and Repairs	I/V*	IV/III**	L	M
Car	V	II	L	M
Durables	V	II	H	L
Other	V	II	L	M
Medical and Dental	V	III	L	H/M**
Total Debt	V	II	L	M

*Difference is 0.5 percent
**Difference is 0.4 percent

The most consistent pattern is found in the highest percent of no debt. For FLC, it is at stage V, except for additions and repairs. The lowest percent of no debt for FLC stages has considerable variation, but stage II predominates. For SES, the highest percent of no debt is at the low level, with durables the only exception--at the high level

Table 4.4. Type of Debt Group: Percent of Families With No Debt (Tables A.6, A.12, A.18)

Type of Debt Variable	FLC Stages		SES Levels#	
	Highest	Lowest	Highest	Lowest
Total Installment	V	II	L	M
Total Noninstallment	V	III	L/M*	H
Total Debt	V	II	L	M

*Both have the same percent
#L-low; M-middle; H-high

Debt in the Sample Population

For an overview of the with debt population, the means (percent of debt-to-income) and its percent in the total sample population are tabulated. The results are given in Table 4.5. From this, comparisons can be made within debt groups and between groups for similar debt variables.

In the installment incurrence group, the highest degree of debt (means percent) is for car debt, with other debt being the second highest. The lowest degree of debt is for durables debt.

The noninstallment incurrence debt group could not be analyzed with the two-way analysis of variance because of the very small sample size. Tables of means were also not included because the very small percent of the population could easily distort the means and was not considered typical of the general population. The grand means are included in

Table 4.5. All Debt Variables by Percent of Total Population and Grand Mean Degree of Debt* for the With Debt Population

Variable	Installment Debt		Noninstallment Debt		Total Debt	
	Mean	N	Mean	N	Mean	N
Additions and Repairs	11.2	8.5	9.7	1.4	11.3	9.5
Car	15.0	40.2	30.8	3.0	16.5	42.3
Durables	4.6	23.5	16.5	1.1	5.2	24.5
Other	12.9	27.7	19.2	9.3	16.0	33.5
Medical and Dental	6.4	4.2	16.6	5.1	11.7	8.7
Total	18.5	65.3	21.5	18.1	22.8	70.2

*expressed as a percent

the table only as a bridge and as a possible indication of the change and direction from the installment incurrence means to the total incurrence means.

For the total incurrence debt group, the highest degree of debt is for car debt, almost matched by other debt. The smallest degree of debt is for durables. Though the relative placement for the totals are the same as for the installment incurrence group, the means percent or degree of debt is higher.

Looking at the totals of the type of debt (Table 4.5) installment debt was owed by 65.3 percent of the sample population having a mean debt to income ratio of 18.5 percent,

and is used much more frequently than noninstallment debt which was owed by 18.1 percent of the families. However, the debt ratio was higher at 21.5 percent. Some kind of debt, that is, total debt was owed by 70.2 percent of the families; the debt ratio being 22.8 percent. This would seem to indicate that some families are assuming both installment and noninstallment debt which is compatible with observed experience.

Tests of Hypotheses

The results of the two-way analysis of variance for the three groups of variables--installment incurrences, total incurrences, and totals for type of debt--are presented in Tables 4.6 - 4.8.

Hypotheses were previously stated in a directional form. The hypotheses are here restated in a non-directional null form to facilitate acceptance or rejection. They are:

I. There will be no difference in the degree of debt for each of the five debt incurrence categories, that is, additions and repairs, car, durables, other, and medical and dental, both for the installment incurrence debt group and the total incurrence debt group

A. between stages of the family life cycle,

B. between levels of socioeconomic status, and

C. no interaction between family life cycle and socioeconomic status.

II. There will be no difference in the degree of debt between the three types of total debt--installment, noninstallment and (grand) total

A. for stages of the family life cycle,

B. for levels of socioeconomic status, and

C. no interaction between family life cycle and socioeconomic status.

Debt Incurrence Categories

Installment

Examination of the installment debt incurrence group (Table 4.6) reveals that only durables installment debt had a significant main effect and this was for socioeconomic status, which had an F ratio of 5.659 with 2 degrees of freedom at the .004 level of probability.

Based on these results, Hypothesis I for the installment incurrence group is accepted or rejected as follows:

A. Between stages of the family life cycle, the statistics show no significant differences from this main effect. Therefore, the null hypothesis is accepted.

B. Between levels of socioeconomic status, as indicated in Table 4.6, there was a significant main effect for durables installment debt. There were no significant differences for additions and repairs, car, other, or medical and dental installment debt. Therefore, for durables installment debt the null hypothesis is rejected. For additions and repairs, car, other, and medical and dental installment debt the null hypothesis is accepted.

C. There was no interaction between the effects of family life cycle and socioeconomic status. Therefore, the null hypothesis of no interaction is accepted.

Table 4.6. Two-Way Analysis of Variance of Family Life Cycle and Socioeconomic Status for Installment Debt Incurrences

Installment Variable	N# (%)	Source of Variation	Degrees of Freedom	F Ratio	Level of Probability
Addition & Repairs	106 (8.5)				
		Main effect			
		of SES	2	2.061	.131
(No stage I)		of FLC	3	1.042	.379
		Interaction			
		SES by FLC	6	.717	.999
		Residual	94		
Car	503 (40.2)				
		Main effect			
		of SES	2	2.501	.081
		of FLC	4	2.020	.089
		Interaction			
		SES by FLC	8	1.417	.186
		Residual	488		
Durables	298 (23.8)				
		Main effect			
		of SES	2	5.659	.004*
(No stage I)		of FLC	3	2.255	.081
		Interaction			
		SES by FLC	6	1.266	.272
		Residual	286		
Other	347 (27.7)				
		Main effect			
		of SES	2	1.084	.340
		of FLC	4	.816	.999
		Interaction			
		SES by FLC	8	1.248	.269
		Residual	332		
Medical & Dental	53 (4.2)				
		Main effect			
		of SES	2	2.015	.144
(No stage I, V)		of FLC	2	.130	.999
		Interaction			
		SES by FLC	4	.082	.999
		Residual	44		

*Significant at < .05 level
#Number of families with each debt
%-Percent of population with each debt

Total

The total incurrence group results (Table 4.7) shows only total car debt had a significant main effect for socio-economic status with an F ratio of 4.317 with 2 degrees of freedom at the .014 level of probability.

Total other debt, part of this group, was the only debt variable tested which shows a significant two-way interaction between family life cycle and socioeconomic status with an F ratio of 2.264 with 8 degrees of freedom at the .022 level of probability. The means percents (degree of debt) were plotted on a graph (Figure 4.1) to look at the interactive effect.

The lines are obviously not parallel and do cross each other repeatedly. The high level of SES is quite stable. But low and middle levels of SES cross several times. Low SES level has a very high degree of debt at FLC stage I and a high degree of debt at stage IV. Middle SES level has a high degree of debt at FLC stage V and a moderately high degree of debt at stage II. In each case the high points for low level SES come one FLC stage before a rise in degree of debt for middle SES.

Table 4.7. Two-Way Analysis of Variance of Family Life Cycle and Socioeconomic Status for Total Incurrence Debt

Total Variable	N (%)	Source of Variation	Degrees of Freedom	F Ratio	Level of Probability
Additions & Repairs	119 (9.5)	Main effect			
		of SES	2	1.947	.146
(No stage I)		of FLC	3	.836	.999
		Interaction			
		SES by FLC	6	.859	.999
		Residual	107		
Car	529 (42.3)	Main effect			
		of SES	2	4.317	.014*
		of FLC	3	.123	.999
		Interaction			
		SES by FLC	8	1.001	.435
		Residual	514		
Durables	307 (24.5)	Main effect			
		of SES	2	1.831	.160
(No stage I)		of FLC	3	1.069	.363
		Interaction			
		SES by FLC	6	.978	.999
		Residual	295		
Other	420 (33.5)	Main effect			
		of SES	2	1.898	.149
		of FLC	4	1.137	.338
		Interaction			
		SES by FLC	8	2.264	.022*
		Residual	405		
Medical & Dental	109 (8.7)	Main effect			
		of SES	2	2.303	.103
(No stage I, V)		of FLC	2	.195	.999
		Interaction			
		SES by FLC	4	1.140	.342
		Residual	100		

*Significant at < .05 level

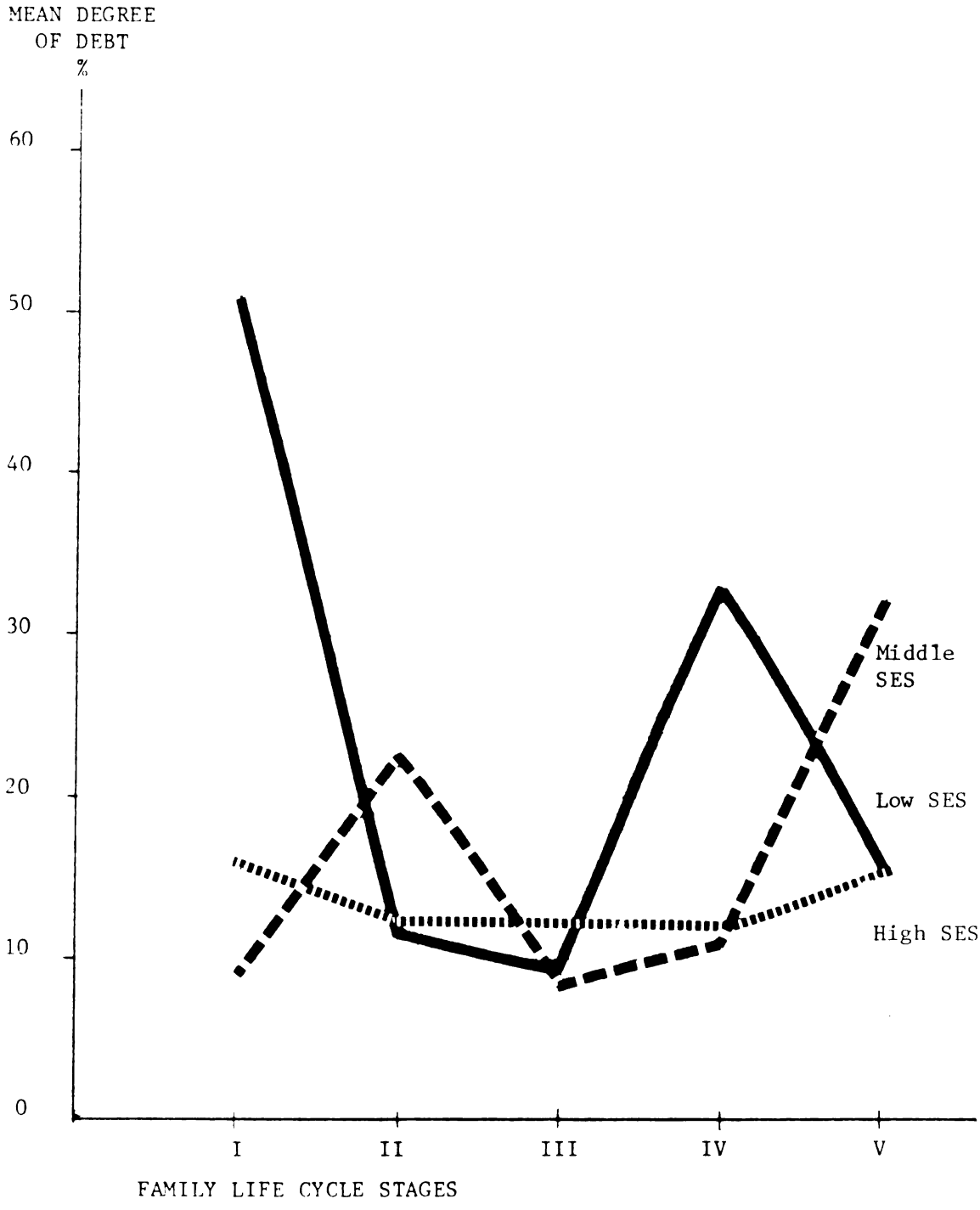

Figure 4.1 Total Other Debt: Mean Degree of Debt
Interaction Between FLC & SES

Based on these results, Hypothesis I for the total incurrence group is accepted or rejected as follows:

A. Between stages of the family life cycle, the statistics show no significant differences from this main effect. Therefore, the null hypothesis is accepted.

B. Between levels of socioeconomic status, as indicated above from Table 4.7, there was a significant main effect for total car debt. There were no significant main effects for additions and repairs, durables, other or medical and dental. Other showed a significant interaction. Therefore, for total car debt the null hypothesis is rejected. For additions and repairs, durables, other, and medical and dental the null hypothesis of no difference for main effect is accepted.

C. An interaction between the effects of family life cycle and socioeconomic status was found, as noted above, and shown in Table 4.7, for total other debt. No other interaction was found. Therefore, the null hypothesis of no interaction for total other debt is rejected. For additions and repairs, car, durables, and medical and dental, the null hypothesis of no interaction is accepted.

Type of Debt Category

Looking at the type of debt group (Table 4.8) reveals a significant main effect for socioeconomic status for each one in the group. The results of the significant main effect of socioeconomic status, all with 2 degrees of freedom were

Table 4.8 Two-Way Analysis of Variance of Family Life Cycle and Socioeconomic Status for Types of Debt

Type Variable	N (%)	Source Variation	Degrees of Freedom	F Ratio	Level of Probability
Total Installment	818 (65.3)				
		Main effect			
		of SES	2	4.235	.015*
		of FLC	4	1.585	.175
		Interaction			
		SES by FLC	8	1.712	.091
		Residual	803		
Total Non-installment	226 (18.1)				
		Main effect			
		of SES	2	4.477	.012*
		of FLC	4	.242	.999
		Interaction			
		SES by FLC	8	1.245	.274
		Residual	211		
Total	879 (70.2)				
		Main effect			
		of SES	2	5.557	.004*
		of FLC	4	.729	.999
		Interaction			
		SES by FLC	8	1.564	.131
		Residual	864		

*Significant at < .05 level

as follows: total installment debt had an F ratio of 4.235; total noninstallment debt had an F ratio of 4.477; and total debt (grand total) had an F ratio of 5.557 at the levels of probability of .015, .012, and .004 respectively. Thus there was a significant effect of socioeconomic status on all three types of debt.

The test results applicable to Hypothesis II for the type of debt are accepted or rejected as follows:

A. Between stages of the family life cycle, the statistics show no significant differences from this main effect. Therefore, the null hypothesis of no effect is accepted.

B. Between levels of socioeconomic status, there was a significant main effect for total installment debt, total noninstallment debt, and total debt. Therefore, the null hypothesis of no effect is rejected for all debt variables.

C. There was no interaction between the effects of family life cycle and socioeconomic status. Therefore, the null hypothesis of no interaction is accepted.

The post hoc analysis, to look for where the significant differences were occurring, was completed for those debt variables whose two-way analysis of variance tests were statistically significant as noted above.

To summarize, all significant main effects were from the effect of socioeconomic status. An ANOVA was therefore computed separately for each possible contrast of socioeconomic status levels with the total family life cycle

range. (The same exception applies as in the complete two-way analysis of variance computation; that is, installment durables debt eliminated FLC stage I.) The effect of this was to analyze for differences between each SES contrast holding the effect of the stages of the family life cycle constant. The results are presented in Table 4.9.

The significant contrast levels of socioeconomic status are related to comparable directional hypotheses (see Chapter I, p. 12).

There were no significant differences in the contrast between the low and middle levels of socioeconomic status. The results for the individual variables are:

For durables installment debt, it was hypothesized that a linear pattern will emerge, with the largest ratio at the low level and the smallest at the high level.* Significant contrasts were found between low and high levels at the .001 level of probability; and between middle and high levels at the .017 level of probability. The hypothesis is supported.

For total car debt, it was hypothesized that an inverted uneven V pattern will emerge, with an intermediate ratio at the low level, the largest ratio at the middle and the smallest ratio at high. A significant contrast was found

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*Comparison of means for significant main effects can be found in the next section. The level for the largest and smallest ratios (percents) is discussed.

Table 4.9. Post Hoc Analysis of Variance Contrast of All Socioeconomic Levels for Significant Debt Variables

Variable	Contrast Levels	Degrees of Freedom	F Ratio	Level of Probability
Durables Installment Debt	SES Between:			
	Low & Middle	1	.681	.999
	Middle & High	1	5.740	.017*
	Low & High	1	11.234	.001*
Total Car Debt	SES Between:			
	Low & Middle	1	3.052	.078
	Middle & High	1	.003	.999
	Low & High	1	5.784	.016*
Total Installment Debt	SES Between:			
	Low & Middle	1	.658	.999
	Middle & High	1	9.528	.003*
	Low & High	1	3.205	.070
Total Noninstallment Debt	SES Between:			
	Low & Middle	1	2.036	.153
	Middle & High	1	2.116	.144
	Low & High	1	8.265	.005*
Total Debt	SES Between:			
	Low & Middle	1	.680	.999
	Middle & High	1	6.547	.010*
	Low & High	1	9.825	.002*

*Significant at < .05 level

between the low and high levels at the .016 level of probability. The hypothesis was not supported.

For the totals of type of debt--total installment, total noninstallment, and total debt--it was hypothesized that a linear pattern will emerge, with the largest ratio at the low level and the smallest ratio at the high level.

For total installment debt, a significant contrast was found between the middle and high levels of socioeconomic status at the .003 level of probability. The hypothesis was partly supported.

For total noninstallment debt, a significant contrast was found between the low and high levels of SES at the .005 level of probability. The hypothesis was supported.

For total debt, significant contrasts were found between low and high levels of SES at the .002 level of probability; and between middle and high levels of SES at the .01 level of probability. The first significant contrast supports the hypothesis.

Comparison of Means for Significant Main Effects

Using the descriptive statistics, a matrix table of means (percent of debt to income mean) was formed for each variable tested by the two-way analysis of variance in order to facilitate a comparison of means. These are shown in Tables 4.10 - 4.15.*

*Table 4.12 is for total other debt and should be viewed in conjunction with Figure 4.1.

In examining those debt variables with significant main effects we note the following:

1. For installment durables debt (Table 4.10), the degree of debt is highest for low SES and decreases linearly through the middle and high levels of SES. Between the middle and high SES levels, the difference in degree of debt is 1.2 percent while between the low and high SES levels, the degree of debt difference is 1.8 percent. Both differences were statistically significant on the post hoc analysis as noted above.

2. For total car debt (Table 4.11) the pattern is different. The low level of SES is much higher than middle or high SES, the latter being very close in degree of debt. Although low and middle levels differ more in their marginal means than low and high SES levels, in the latter case, the contrasts are greater across all stages of the family life cycle. This may be the reason why the low and high SES contrast differences were statistically significant while the low and middle SES contrasts were not, on the post hoc analysis.

3. For total installment debt (Table 4.13), the degree of debt is highest for middle SES level, followed by low level, with the high SES level having a much lower degree of debt. The large difference in the mean between middle and high SES levels corroborates the post hoc statistical significance noted above.

A visual examination shows that the high and low means are not consistent across the stages of the family life cycle. FLC stage I has the highest degree of debt and FLC stage III has the lowest degree of debt. However, the highest degree of debt for the low SES level is at FLC stage IV, while the lowest degree of debt for high SES is also at stage IV. Neither trend, however, is sufficient to be statistically significant.

4. For total noninstallment debt (Table 4.14), the degree of debt follows a pattern similar to installment durables debt (1 above) in that it is linear with the highest at low SES level and lowest at high SES level. However, the differences are greater. The difference in the degree of debt between low and high SES levels is over 25 percent, while the difference in the degree of debt between the middle and high levels of SES is 7.5 percent. Thus, the post hoc statistically significant difference for the contrast between low and high SES can be descriptively seen.

5. For the (grand) total debt, (Table 4.15), the degree of debt is again in decreasing order from the highest mean percent at the low SES level through the middle SES level to the smallest mean at the high SES level. However, the comparative size of the spread is not the same as total noninstallment debt (4 above). The difference in the degree of debt between low SES and high SES is 9.3 percent, while the difference in the degree of debt between middle and high

SES levels is 5.2 percent. In the post hoc analysis, both of these contrasts were statistically significant, but the first contrast (low/high) had a lower significance level.

The tables of means for the debt variables that were not statistically significant are presented in Appendix B.

Table 4.10. Durables Installment Debt: Mean Ratios of Debt by FLC and SES (Cell Means and Frequencies)*

Socioeconomic Status Levels	Family Life Cycle Stages					Row Total	
	I	II	III	IV	V	%	(N)
Low	5.1	5.9	4.4	4.2	9.7	5.5	
	(5)	(39)	(11)	(31)	(10)		(96)
Mid	1.6	5.2	5.3	4.8	4.2	4.9	
	(1)	(32)	(21)	(17)	(11)		(82)
High	5.9	4.1	3.5	2.3	4.0	3.7	
	(11)	(56)	(23)	(30)	(17)		(137)
Column %	5.4	4.9	4.4	3.6	5.6	4.6	
Total (N)	(17)	(127)	(55)	(78)	(38)		(315)

*Numbers in parentheses are cell frequencies; ratios are in percent.

Table 4.11. Total Car Debt: Mean Ratios of Debt by FLC and SES (Cell Means and Frequencies)*

Socioeconomic Status Levels	Family Life Cycle Stages					Row Total	
	I	II	III	IV	V	%	(N)
Low	18.7	28.8	13.9	27.6	15.2	23.3	
	(9)	(42)	(21)	(26)	(13)		(111)
Mid	18.3	13.9	14.9	15.5	13.1	14.5	
	(5)	(55)	(33)	(26)	(22)		(141)
High	16.2	12.6	15.0	13.4	19.6	14.8	
	(33)	(83)	(58)	(61)	(42)		(277)
Column %	16.9	16.8	14.7	17.1	17.0	16.5	
Total (N)	(47)	(180)	(112)	(113)	(77)		(529)

*Numbers in parentheses are cell frequencies; ratios are in percent.

Table 4.12. Total Other Debt: Mean Ratios of Debt by FLC and SES (Cell Means and Frequencies)*

Socioeconomic Status Levels	Family Life Cycle Stages					Row Total	
	I	II	III	IV	V	%	(N)
Low	50.2	11.8	9.7	33.5	15.6	19.8	
	(4)	(32)	(10)	(21)	(12)		(79)
Mid	9.2	22.9	8.6	11.1	32.7	18.2	
	(3)	(55)	(30)	(25)	(16)		(129)
High	16.1	12.9	12.6	12.1	15.5	13.3	
	(20)	(78)	(46)	(39)	(29)		(212)
Column %	20.3	16.0	10.9	17.1	20.3	16.0	
Total (N)	(27)	(165)	(86)	(85)	(57)		(420)

*Numbers in parentheses are cell frequencies; ratios are in percent.

Table 4.13. Total Installment Debt: Mean Ratios of Debt by FLC and SES (Cell Means and Frequencies)*

Socioeconomic Status Levels	Family Life Cycle Stages					Row Total	
	I	II	III	IV	V	%	(N)
Low	21.0	19.8	14.6	25.7	14.6	19.8	
	(12)	(68)	(30)	(48)	(28)		(186)
Mid	31.8	25.0	17.1	19.2	18.6	21.2	
	(7)	(84)	(52)	(43)	(37)		(223)
High	21.6	15.9	15.4	13.6	20.3	16.5	
	(41)	(131)	(87)	(90)	(60)		(409)
Column %	22.6	19.5	15.8	18.1	18.5	18.5	
Total (N)	(60)	(283)	(169)	(181)	(125)		(818)

*Numbers in parentheses are cell frequencies; ratios are in percent.

Table 4.14. Total Noninstallment Debt: Mean Ratios of Debt by FLC and SES (Cell Means and Frequencies)*

Socioeconomic Status Levels	Family Life Cycle Stages					Row Total	
	I	II	III	IV	V	%	(N)
Low	38.8 (4)	67.4 (15)	19.7 (12)	33.5 (13)	22.1 (5)	39.8	(49)
Mid	2.4 (2)	23.9 (23)	19.5 (11)	8.8 (9)	49.4 (5)	21.9	(50)
High	8.7 (10)	9.8 (40)	23.0 (31)	14.1 (31)	13.0 (15)	14.4	(127)
Column % Total (N)	15.4 (16)	25.0 (78)	21.6 (54)	18.0 (53)	22.1 (25)	21.5	(226)

*Numbers in parentheses are cell frequencies; ratios are in percent.

Table 4.15. Total Debt: Mean Ratios of Debt by FLC and SES (Cell Means and Frequencies)*

Socioeconomic Status Levels	Family Life Cycle Stages					Row Total	
	I	II	III	IV	V	%	(N)
	33.9 (12)	33.2 (71)	20.4 (33)	34.1 (49)	16.2 (32)	28.6	(197)
Mid	32.5 (7)	29.1 (91)	19.4 (57)	20.5 (44)	24.0 (39)	24.5	(238)
High	23.1 (42)	17.4 (142)	22.6 (91)	16.6 (100)	20.4 (69)	19.3	(444)
Column % Total (N)	26.3 (61)	24.6 (304)	21.2 (181)	21.9 (193)	20.5 (140)	22.8	(879)

*Numbers in parentheses are cell frequencies; ratios are in percent.

CHAPTER V

SUMMARY, CONCLUSIONS AND IMPLICATIONS

Summary

The purpose of this study was to analyze the variations in the ratios of debt to income utilizing the components of installment and noninstallment debt to determine if debt patterns exist in relation to stages of the family life cycle and socioeconomic status levels; and to interpret the findings in respect to implications for family financial management.

Debt patterns were defined to include 1) incurrence and 2) type.

1. Debt incurrence is debt classified by purpose for which it was incurred, that is, additions and repairs, car, durables, other, and medical and dental.

2. Type of debt includes installment, noninstallment and total.

Family was defined as all persons living in the same dwelling who are related by blood, marriage, or adoption. A single person unrelated to the other occupants in the dwelling unit or living alone is a separate family unit.

Installment debt was defined as private, non-mortgage debt subject to two (2) or more regular payments.

Noninstallment debt is generally private, non-mortgage debt not subject to more than one payment. Degree of debt is the term referring to the dependent debt to income ratio measure (expressed as a percent).

Income refers to disposable income which is the total family income after the deduction of estimated federal income taxes.

The source of data for this research study was one year (1968: Wave II) of a four-year panel study on consumer durables and installment debt conducted by the Survey Research Center, University of Michigan covering the years 1967-1970. The data were made available on a four-year merged family tape.

The SRC life cycle classification was modified for this study and operationalized into five (5) stages of the family life cycle. The Duncan Socioeconomic Status Decile scale was modified and operationalized into low, middle and high levels of socioeconomic status. The total sample population numbered 1252 families (primary family units).

The debt components were classified by debt incurrence, by debt type, and their respective totals. The dependent debt variables thus formed were: installment, noninstallment and total incurrence variables for each of the five purposes; totals for installment debt, noninstallment debt, and the (grand) total debt.

The debt measure was the ratio of outstanding dollar amount of debt to the family's disposable income expressed as a percent. Degree of debt is the term used for this debt measure.

The five noninstallment debt incurrence variables had to be eliminated from the major statistical analysis test because of the very small number of families who had debt in this category. The number across the levels and stages of the independent variables did not meet the minimum criteria for a meaningful analysis.

The statistical method used for analysis was the two-way analysis of variance (ANOVA) test. The level of significance was at the .05 probability level. Where there were significant differences from socioeconomic status (main effect) as a result of the two-way ANOVA, a post hoc analysis was made to determine where the significant differences were occurring, that is, at or between which levels of SES. The method used for this was an ANOVA for each possible contrast of levels for the significant variable (SES), holding the other independent variable constant (FLC).

Conclusions

The results of the two-way analysis of variance data analysis showed a significant effect of socioeconomic status levels on the following debt variables: durables installment debt, total car debt, total installment debt, total noninstallment debt, and the (grand) total debt. The post

hoc analysis showed that none of the significant differences were between low and middle levels of SES; but significant differences occurred between low and high SES levels, between middle and high SES levels, or both--depending on the individual debt variable.

The basic direction of differences was linear with the largest debt ratio at the low SES level and the smallest ratio at the high SES level. Exceptions were: total installment debt where middle SES level had the largest ratio; and total car debt where middle and high SES levels were almost the same for the smallest ratio.

There was only one significant interaction effect of family life cycle and socioeconomic status. This occurred for total other debt.

There were no significant effects (main effects) from stages of the family life cycle. There are several possible reasons why this was contrary to past studies (Shaffer, etc.). The use of credit has become more widespread and its differences in relation to the stages of the family life cycle may have become diffused. The change may, in part, also reflect the expanded use of credit cards. One other possibility is that the study sample population is under-represented for young families where important differences are likely to occur in relation to later stages of the FLC. The SRC panel study did not replace lost families after the initial interview. Both because of faster changes in

status at this age (single to married, or no children to with children) and because younger families are generally more mobile, the lost or dropped families are likely to occur disproportionately at the younger stages.

The empirical results of this study indicate that credit/debt patterns are influenced by socioeconomic status level. While not all significant differences were as generally expected--that is, degree of debt and level of socioeconomic status would be inversely related--the heaviest debt burdens were found most likely to occur at the low level of SES.

Although stages of the family life cycle did not show statistically significant patterns of degree of debt for most debt categories, a pattern similar to what would be expected on the basis of previous findings was reflected in the frequency distribution. In most debt categories, the largest percent of families with debt was at FLC stage II (young, married, youngest child under 6 years of age) while the smallest percent was at stage V (older, married with no children at home or single).

Stages of the family life cycle and socioeconomic status levels showed the only statistically significant interactive effect with respect to total other debt. This may be of special importance and may indicate a changing pattern of installment credit/debt from the traditional, more formal, secured-type of installment loan to expanded use of

newer types of credit instruments for a wide variety of purposes.

Implications from This Study

For Education and Counseling

Analysis of the empirical data indicates that the SES level has an effect on the degree of debt both for types of debt and for some purposes for which debt is incurred. Therefore, the concept of socioeconomic status has relevancy in understanding the use of consumer credit/debt. Incorporation of this concept into the learning process may be useful in family financial management in general and in the use of consumer credit in particular.

Socioeconomic status can also provide an additional tool to use in a "preventative approach" to assist families in avoiding overextended debt or other financial problems. The family needs information to get maximum benefit from the allocation and use of its credit resource and to understand factors that influence its family financial planning; its SES level can help place the family in the proper universe for behavior comparison.

The significant interaction between FLC and SES on total other debt, coupled with the showing in the literature that the FLC concept is related to the management of money resources establishes a further relationship--that is, a family's stage of the life cycle affects the degree of debt incurred for total other debt. Therefore, FLC continues to

be a viable concept to be considered in a family's use of credit.

The information gained from this study on the relative degree of debt for the various purposes for which debt is incurred can be used by teachers in connection with consumer credit. It can provide a basis for more accurately anticipating financial problems as well as encouraging improved decision-making.

For Research

There are several possible areas of research from which to obtain additional empirical data on family debt patterns (see suggestions for further research below). Any new knowledge gained would contribute to helping families prevent, ease, or alleviate financial or economic problems. Such information would also have important implications for family financial management in the allocation and use of economic resources--short, intermediate, and long term.

Suggestions for Further Research

Additional analysis of data for other years would show if patterns are consistent over time or vary with changing economic conditions, for example, in times of recession or inflation. A replication of the study design and analysis could be made for another year of the four-year panel debt study. In addition, if comparable data can be obtained for years of substantially changing economic conditions, such

information could provide insights as to how families adjust their debt habits to external economic conditions; and what problems, if any, arise in relation to boom, recession, inflation, or a combination of recession and inflation. The longitudinal approach would also uncover any pattern changes due to debt dynamics.

Another approach would be to pursue alternative ways of analyzing noninstallment debt per se as well as in relation to installment debt. One method of analyzing the noninstallment debt components would be a follow-up study of this thesis using the same study design but changing the statistical method of analysis. The Chi Square statistical test could use the frequencies observed as the dependent debt measure. Since the frequency of no debt is so high, using the no debt frequency as the measure would probably give a more meaningful and precise pattern. Any statistical significances from the Chi Square test could then be analyzed post hoc using an intercellular contrast with which to determine where differences between the frequencies observed and frequencies expected were occurring.

An additional follow-up study based on this thesis design could be a comparison of the degree of debt for outstanding versus annual installment debt components. The "rule of thumb" used in education and counseling is: above twenty percent of income for consumer credit (without mortgage) is the point of overextension. Is this annual or

outstanding debt? Is there a difference in the relative use of the components?

Further analysis might be made of the concept of socioeconomic status in relation to consumer credit/debt not only as an effect in itself but also in relation to the family life cycle--especially with a full range of the family life cycle stages with both young families and retired stages fully represented in the research study.

A possible alternative method to test the concept of socioeconomic status would be to treat it as a quantitative variable, at least as grouped intervals that are continuous.

Study of the other debt category could be expanded. Not only has the aggregate amount of dollar debt increased, with larger percentages of families using debt, but it is also being used for more purposes. Therefore, a study of the other category broken down into more homogeneous categories may be fruitful. A possible breakdown for other personal debt could be:

1. travel, recreation and hobbies, adult education expenses;

2. major changes in family structure: marriage, divorce, funeral expenses;

3. unexpected expenses from lawsuits or fines, unemployment, other personal crises; and,

4. all other debts which are private and discretionary.

An investigation of the growth of other debt in relation to the expanded use of credit cards may be worthwhile.

APPENDICES

APPENDIX A

FREQUENCY DISTRIBUTION OF INDIVIDUAL DEBT VARIABLES

Table A.1. Additions and Repairs Installment Debt
Frequency Distribution: Families With No Debt*

Socio-economic Status Levels	Family Life Cycle Stages I			II			III			IV			V			Row Total		
	N	N'	%	N	N'	%	N	N'	%	N	N'	%	N	N'	%	N	N'	%
Low	22	22	100.0	84	77	91.7	45	42	93.3	76	68	89.5	76	73	96.1	303	282	93.1
Mid	11	9	81.8	102	93	91.2	69	64	92.8	58	50	86.2	68	59	86.8	308	275	89.3
High	64	61	95.3	180	167	92.8	116	98	84.5	142	125	88.0	139	133	95.7	641	584	91.1
Column Total	97	92	94.8	366	337	92.1	230	204	88.7	276	243	88.0	283	265	93.6	1252	1141	91.1

*See note below.

Table A.2. Car Installment Debt
Frequency Distribution: Families With No Debt*

Socio-economic Status Levels	Family Life Cycle Stages I			II			III			IV			V			Row Total		
	N	N'	%	N	N'	%	N	N'	%	N	N'	%	N	N'	%	N	N'	%
Low	22	13	59.1	84	45	53.6	45	25	55.6	76	52	68.4	76	64	84.2	303	199	65.7
Mid	11	7	63.6	102	49	48.0	69	37	53.6	58	33	56.9	68	47	69.1	308	173	56.2
High	64	31	48.4	180	100	55.6	116	62	53.4	142	83	58.5	139	101	72.7	641	377	58.8
Column Total	97	51	52.6	366	194	53.0	230	124	53.9	276	168	60.9	283	212	74.9	1252	749	59.8

*Note: N is the number of families in the cell.
N' is the number of families in the cell without debt.
% is the ratio of N' to N.

Table A.3. Durables Installment Debt
Frequency Distribution: Families With No Debt*

Socio-economic Status Levels	Family Life Cycle Stages I			II			III			IV			V			Row Total		
	N	N'	%	N	N'	%	N	N'	%	N	N'	%	N	N'	%	N	N'	%
Low	22	17	77.3	84	45	53.6	45	34	75.6	76	45	59.2	76	66	86.8	303	207	68.3
Mid	11	10	90.9	102	70	68.6	69	48	69.6	58	41	70.7	68	57	83.8	308	226	73.4
High	64	53	82.8	180	124	68.9	116	93	80.2	142	112	78.9	139	122	87.8	641	504	78.6
Column Total	97	80	82.5	366	239	65.3	230	175	76.1	276	198	71.7	283	245	86.6	1252	937	74.8

*See note below.

Table A.4. Other Installment Debt
Frequency Distribution: Families With No Debt*

Socio-economic Status Levels	Family Life Cycle Stages I			II			III			IV			V			Row Total		
	N	N'	%	N	N'	%	N	N'	%	N	N'	%	N	N'	%	N	N'	%
Low	22	20	90.9	84	56	66.7	45	36	80.0	76	59	77.6	76	67	88.2	303	238	78.5
Mid	11	8	72.7	102	55	53.9	69	41	59.4	58	37	63.8	68	54	79.4	308	195	63.3
High	64	48	75.0	180	114	63.3	116	78	67.2	142	115	81.0	139	117	84.2	641	472	73.6
Column Total	97	76	78.3	366	225	61.5	230	155	67.4	276	211	76.4	283	238	84.1	1252	905	72.3

*Note: N is the number of families in the cell.
N' is the number of families in the cell without debt.
% is the ratio of N' to N.

Table A.5. Medical and Dental Installment Debt
Frequency Distribution: Families With No Debt*

Socio-economic Status Levels	Family Life Cycle Stages I			II			III			IV			V			Row Total		
	N	N'	%	N	N'	%	N	N'	%	N	N'	%	N	N'	%	N	N'	%
Low	22	20	90.9	84	80	95.2	45	41	91.1	76	74	97.4	76	75	98.7	303	290	95.7
Mid	11	10	90.9	102	94	92.2	69	63	91.3	58	55	94.8	68	67	98.5	308	289	93.8
High	64	62	96.9	180	170	94.4	116	106	91.4	142	136	95.8	139	135	97.1	641	609	95.0
Column Total	97	92	94.8	366	344	94.0	230	210	91.3	276	265	96.0	283	277	97.9	1252	1188	94.9

*See note below.

Table A.6. Total Installment Debt
Frequency Distribution: Families With No Debt*

Socio-economic Status Levels	Family Life Cycle Stages I			II			III			IV			V			Row Total		
	N	N'	%	N	N'	%	N	N'	%	N	N'	%	N	N'	%	N	N'	%
Low	22	10	45.5	84	16	19.0	45	15	33.3	76	28	36.8	76	48	63.2	303	117	38.6
Mid	11	4	36.4	102	18	17.6	69	17	24.6	58	15	25.9	68	31	45.6	308	85	27.6
High	64	23	35.9	180	49	27.2	116	29	25.0	142	52	36.6	139	79	56.8	641	232	36.2
Column Total	97	37	38.1	366	83	22.7	230	61	26.5	276	95	34.4	283	158	55.8	1252	434	34.7

*Note: N is the number of families in the cell.
N' is the number of families in the cell without debt.
% is the ratio of N' to N.

Table A.7. Additions and Repairs Noninstallment Debt Frequency Distribution: Families With No Debt*

Socio-economic Status Levels	Family Life Cycle Stages															Row Total		
	I			II			III			IV			V					
	N	N'	%	N	N'	%	N	N'	%	N	N'	%	N	N'	%	N	N'	%
Low	22	21	95.5	84	82	97.6	45	45	100.0	76	75	98.7	76	76	100.0	303	299	98.7
Mid	11	11	100.0	102	101	99.0	69	68	98.6	58	58	100.0	68	68	100.0	308	306	99.4
High	64	64	100.0	180	176	97.8	116	113	97.4	142	139	97.9	139	138	99.3	641	630	98.3
Column Total	97	96	99.0	366	359	98.1	230	226	98.3	276	272	98.6	283	282	99.6	1252	1235	98.6

*See note below.

Table A.8. Car Noninstallment Debt Frequency Distribution: Families With No Debt*

Socio-economic Status Levels	Family Life Cycle Stages															Row Total		
	I			II			III			IV			V					
	N	N'	%	N	N'	%	N	N'	%	N	N'	%	N	N'	%	N	N'	%
Low	22	22	100.0	84	80	95.2	45	44	97.8	76	73	96.1	76	75	98.7	303	294	97.0
Mid	11	10	90.9	102	99	97.1	69	68	98.6	58	57	98.3	58	66	97.1	308	300	97.4
High	64	64	100.0	180	175	97.2	116	109	94.0	142	138	97.2	139	134	96.4	641	620	96.7
Column Total	97	96	99.0	366	354	96.7	230	221	96.1	276	268	97.1	283	275	97.2	1252	1214	97.0

*Note: N is the number of families in the cell.
N' is the number of families in the cell without debt.
% is the ratio of N' to N.

Table A.9. Durables Noninstallment Debt
Frequency Distribution: Families With No Debt *

Socio-economic Status Levels	Family Life Cycle Stages															Row Total		
	I			II			III			IV			V					
	N	N'	%	N	N'	%	N	N'	%	N	N'	%	N	N'	%	N	N'	%
Low	22	22	100.0	84	83	98.8	45	44	97.8	76	76	100.0	76	76	100.0	303	301	99.3
Mid	11	11	100.0	102	96	94.1	69	68	98.6	58	57	98.3	68	68	100.0	308	300	97.4
High	64	64	100.0	180	178	98.9	116	114	98.3	142	142	100.0	139	139	100.0	641	637	99.4
Column Total	97	97	100.0	366	357	97.5	230	226	98.3	276	275	99.6	283	283	100.0	1252	1238	98.9

*See note below.

Table A.10. Other Noninstallment Debt
Frequency Distribution: Families With No Debt*

Socio-economic Status Levels	Family Life Cycle Stages															Row Total		
	I			II			III			IV			V					
	N	N'	%	N	N'	%	N	N'	%	N	N'	%	N	N'	%	N	N'	%
Low	22	19	86.4	84	79	94.0	45	42	93.3	76	69	90.8	76	72	94.7	303	281	92.7
Mid	11	10	90.9	102	89	87.3	69	66	95.7	58	53	91.4	68	65	95.6	308	283	91.9
High	64	56	87.5	180	161	89.4	116	99	85.3	142	125	88.0	139	130	93.5	641	571	89.1
Column Total	97	85	87.6	366	329	89.9	230	207	90.0	276	247	89.5	283	267	94.3	1252	1135	90.7

*Note: N is the number of families in the cell.
N' is the number of families in the cell without debt.
% is the ratio of N' to N.

Table A.11. Medical and Dental Noninstallment Debt
Frequency Distribution: Families With No Debt*

Socio-economic Status Levels	Family Life Cycle Stages I			II			III			IV			V			Row Total		
	N	N'	%	N	N'	%	N	N'	%	N	N'	%	N	N'	%	N	N'	%
Low	22	22	100.0	84	78	92.9	45	38	84.4	76	74	97.4	76	76	100.0	303	288	95.0
Mid	11	11	100.0	102	98	96.1	69	63	91.3	58	56	96.6	68	67	98.5	308	295	95.8
High	64	61	95.3	180	165	91.7	116	109	94.0	142	133	93.7	139	137	98.6	641	605	94.4
Column Total	97	94	96.9	366	341	93.2	230	210	91.3	276	263	95.3	283	280	98.9	1252	1188	94.9

*See note below.

Table A.12. Total Noninstallment Debt
Frequency Distribution: Families With No Debt*

Socio-economic Status Levels	Family Life Cycle Stages I			II			III			IV			V			Row Total		
	N	N'	%	N	N'	%	N	N'	%	N	N'	%	N	N'	%	N	N'	%
Low	22	18	81.8	84	69	82.1	45	33	73.3	76	63	82.9	76	71	93.4	303	254	83.8
Mid	11	9	81.8	102	79	77.5	69	58	84.1	58	49	84.5	68	63	92.6	308	258	83.8
High	64	54	84.4	180	140	77.8	116	85	73.3	142	111	78.2	139	124	89.2	641	514	80.2
Column Total	97	81	83.5	366	288	78.7	230	176	76.5	276	223	80.8	283	258	91.2	1252	1026	81.9

*Note: N is the number of families in the cell.
N' is the number of families in the cell without debt.
% is the ratio of N' to N.

Table A.13. Total Additions and Repairs Debt
Frequency Distribution: Families With No Debt*

Socio-economic Status Levels	Family Life Cycle Stages															Row Total		
	I			II			III			IV			V					
	N	N'	%	N	N'	%	N	N'	%	N	N'	%	N	N'	%	N	N'	%
Low	22	21	95.5	84	76	90.5	45	42	93.3	76	68	89.5	76	73	96.1	303	280	92.4
Mid	11	9	81.8	102	92	90.2	69	63	91.3	58	50	86.2	68	59	86.8	308	273	88.6
High	64	61	95.3	180	163	90.6	116	96	82.8	142	122	85.9	139	132	95.0	641	574	89.5
Column Total	97	91	93.8	366	331	90.4	230	201	87.4	276	240	87.0	283	264	93.3	1252	1127	90.0

*See note below.

Table A.14. Total Car Debt
Frequency Distribution: Families With No Debt*

Socio-economic Status Levels	Family Life Cycle Stages															Row Total		
	I			II			III			IV			V					
	N	N'	%	N	N'	%	N	N'	%	N	N'	%	N	N'	%	N	N'	%
Low	22	13	59.1	84	42	50.0	45	24	53.3	76	50	65.8	76	63	82.9	303	192	63.4
Mid	11	6	54.5	102	47	46.1	69	36	52.2	58	32	55.2	68	46	67.6	308	167	54.2
High	64	31	48.4	180	97	53.9	116	58	50.0	142	81	57.0	139	97	69.8	641	364	56.8
Column Total	97	50	51.5	366	186	50.8	230	118	51.3	276	163	59.1	283	206	72.8	1252	723	57.7

*Note: N is the number of families in the cell.
N' is the number of families in the cell without debt.
% is the ratio of N' to N.

Table A.15. Total Durables Debt
Frequency Distribution: Families With No Debt*

Socio-economic Status Levels	Family Life Cycle Stages I			II			III			IV			V			Row Total		
	N	N'	%	N	N'	%	N	N'	%	N	N'	%	N	N'	%	N	N'	%
Low	22	17	77.3	84	45	53.6	45	34	75.6	76	45	59.2	76	66	86.8	303	207	68.3
Mid	11	10	90.9	102	66	64.7	69	47	68.1	58	41	70.7	68	57	83.8	308	221	71.8
High	64	53	82.8	180	122	67.8	116	91	78.4	142	112	78.9	139	122	87.8	641	500	78.0
Column Total	97	80	82.5	366	233	63.7	230	172	74.8	276	198	71.7	283	245	86.6	1252	928	74.1

*See note below.

Table A.16. Total Other Debt
Frequency Distribution: Families With No Debt*

Socio-economic Status Levels	Family Life Cycle Stages I			II			III			IV			V			Row Total		
	N	N'	%	N	N'	%	N	N'	%	N	N'	%	N	N'	%	N	N'	%
Low	22	18	81.8	84	52	61.9	45	35	77.8	76	55	72.4	76	64	84.2	303	224	73.9
Mid	11	8	72.7	102	47	46.1	69	39	56.5	58	33	56.9	68	52	76.5	308	179	58.1
High	64	44	68.8	180	102	56.7	116	70	60.3	142	103	72.5	139	110	79.1	641	429	66.9
Column Total	97	70	72.2	366	201	54.9	230	144	62.6	276	191	69.2	283	226	79.9	1252	832	66.5

*Note: N is the number of families in the cell.
N' is the number of families in the cell without debt.
% is the ratio of N' to N.

Table A.17. Total Medical and Dental Debt
Frequency Distribution: Families With No Debt*

Socio-economic Status Levels	Family Life Cycle Stages I			II			III			IV			V			Row Total		
	N	N'	%	N	N'	%	N	N'	%	N	N'	%	N	N'	%	N	N'	%
Low	22	20	90.9	84	74	88.1	45	34	75.6	76	72	94.7	76	75	98.7	303	275	90.8
Mid	11	10	90.9	102	90	88.2	69	57	82.6	58	54	93.1	68	66	97.1	308	277	89.9
High	64	59	92.2	180	156	86.7	116	99	85.3	142	127	89.4	139	133	95.7	641	574	89.5
Column Total	97	89	91.8	366	320	87.4	230	190	82.6	276	253	91.7	283	274	96.8	1252	1126	89.9

*See note below.

Table A.18. Total Debt
Frequency Distribution: Families With No Debt*

Socio-economic Status Levels	Family Life Cycle Stages I			II			III			IV			V			Row Total		
	N	N'	%	N	N'	%	N	N'	%	N	N'	%	N	N'	%	N	N'	%
Low	22	10	45.5	84	13	15.5	45	12	26.7	76	27	35.5	76	44	57.9	303	106	35.0
Mid	11	4	36.4	102	11	10.8	69	12	17.4	58	14	24.1	68	29	42.6	308	70	22.7
High	64	22	34.4	180	38	21.1	116	25	21.6	142	42	29.6	139	70	50.4	641	197	30.7
Column Total	97	36	37.1	366	62	16.9	230	49	21.3	276	83	30.1	283	143	50.5	1252	373	29.8

*Note: N is the number of families in the cell.
N' is the number of families in the cell without debt.
% is the ratio of N' to N.

APPENDIX B

MEAN RATIOS OF INDIVIDUAL VARIABLES NOT SIGNIFICANT

Table B.1. Additions and Repairs: Installment Debt, Mean Ratios of Debt to FLC and SES (Cell Means and Frequencies)*

Socioeconomic Status Levels	Family Life Cycle Stages I	II	III	IV	V	Row Total %	(N)
Low	--	17.3 (7)	3.0 (3)	13.2 (8)	11.6 (3)	12.9	(21)
Mid	1.4 (2)	27.7 (9)	12.9 (5)	14.0 (8)	8.0 (9)	15.2	(33)
High	13.8 (3)	7.5 (13)	8.3 (18)	8.2 (17)	7.9 (6)	8.4	(57)
Column %	8.8	16.2	8.6	10.8	8.6	11.2	
Total (N)	(5)	(29)	(26)	(33)	(18)		(111)

*Numbers in parentheses are cell frequencies; ratios are in percent.

Table B.2. Car Installment Debt: Mean Ratios of Debt to FLC and SES (Cell Means and Frequencies)*

Socioeconomic Status Levels	Family Life Cycle Stages I	II	III	IV	V	Row Total %	(N)
Low	18.7 (9)	16.2 (39)	14.0 (20)	20.7 (24)	15.8 (12)	17.0	(104)
Mid	22.3 (4)	14.2 (53)	14.8 (32)	16.0 (25)	13.6 (21)	14.8	(135)
High	16.2 (3)	12.3 (80)	13.5 (54)	13.2 (59)	19.6 (38)	14.3	(264)
Column %	17.2	13.8	14.0	15.5	17.2	15.0	
Total (N)	(46)	(172)	(106)	(108)	(71)		(503)

*Numbers in parentheses are cell frequencies; ratios are in percent.

Table B.3. Other Installment Debt: Mean Ratios of Debt to FLC and SES (Cell Means and Frequencies)*

Socioeconomic Status Levels	Family Life Cycle Stages I	II	III	IV	V	Row Total %	(N)
Low	25.4 (2)	12.2 (28)	9.8 (9)	29.1 (17)	9.5 (9)	16.3	(65)
Mid	3.1 (3)	18.3 (47)	7.0 (28)	9.8 (21)	20.3 (14)	13.9	(113)
High	14.7 (16)	10.9 (66)	8.9 (38)	8.2 (27)	15.5 (22)	11.0	(169)
Column Total (N)	14.8 (21)	13.6 (141)	8.3 (75)	14.2 (65)	15.8 (45)	12.9	(347)

*Numbers in parentheses are cell frequencies; ratios are in percent.

Table B.4. Medical and Dental Installment Debt: Mean Ratios of Debt to FLC and SES (Cell Means and Frequencies)*

Socioeconomic Status Levels	Family Life Cycle Stages I	II	III	IV	V	Row Total %	(N)
Low	3.7 (2)	4.8 (4)	2.9 (4)	3.9 (2)	1.2 (1)	3.6	(13)
Mid	100.3 (1)	8.4 (8)	7.4 (6)	8.8 (3)	1.1 (1)	12.8	(19)
High	3.6 (2)	4.5 (10)	4.0 (10)	2.5 (6)	3.7 (4)	3.8	(32)
Column Total (N)	23.7 (5)	6.0 (22)	4.8 (20)	4.5 (11)	2.9 (6)	6.4	(64)

*Numbers in parentheses are cell frequencies; ratios are in percent.

Table B.5 Total Additions and Repairs Debt: Mean Ratios of Debt to FLC and SES (Cell Means and Frequencies)*

Socioeconomic Status Levels	Family Life Cycle Stages I	II	III	IV	V	Row Total %	(N)
Low	5.3 (1)	20.6 (8)	3.0 (3)	13.2 (8)	11.6 (3)	13.9	(23)
Mid	1.4 (2)	25.2 (10)	11.5 (6)	14.0 (8)	8.0 (9)	14.5	(35)
High	13.8 (3)	6.7 (17)	11.5 (20)	7.6 (20)	6.9 (7)	8.7	(67)
Column % Total (N)	8.2 (6)	15.2 (35)	10.6 (29)	10.3 (36)	8.2 (19)	11.3	(125)

*Numbers in parentheses are cell frequencies; ratios are in percent.

Table B.6. Total Durables Debt: Mean Ratios of Debt to FLC and SES (Cell Means and Frequencies)*

Socioeconomic Status Levels	Family Life Cycle Stages I	II	III	IV	V	Row Total %	(N)
Low	5.1 (5)	5.9 (39)	4.6 (11)	4.2 (31)	9.7 (10)	5.6	(96)
Mid	1.6 (1)	8.3 (36)	5.4 (22)	4.9 (17)	4.2 (11)	6.3	(87)
High	5.9 (11)	4.0 (58)	6.5 (25)	2.3 (30)	4.0 (17)	4.2	(141)
Column % Total (N)	5.4 (17)	5.7 (133)	5.7 (58)	3.6 (78)	5.6 (38)	5.2	(324)

*Numbers in parentheses are cell frequencies; ratios are in percent.

Table 3.7. Total Medical and Dental Debt: Mean Ratios of Debt to FLC and SES (Cell Means and Frequencies)*

Socioeconomic Status Levels	Family Life Cycle Stages					Row Total	
	I	II	III	IV	V	%	(N)
Low	3.7 (2)	37.3 (10)	20.5 (11)	3.4 (4)	1.2 (1)	22.2	(28)
Mid	103.8 (1)	6.1 (12)	13.9 (12)	7.2 (4)	2.9 (2)	12.2	(31)
High	1.8 (5)	3.1 (24)	12.7 (17)	10.1 (15)	3.8 (6)	7.0	(67)
Column % Total (N)	15.0 (8)	11.3 (46)	15.2 (40)	8.4 (23)	3.3 (9)	11.7	(126)

*Numbers in parentheses are cell frequencies; ratios are in percent.

REFERENCES

REFERENCES

Bigelow, Howard F. "Toward a Theory of Family Finance." Journal of Home Economics, Vol. 32, April 1931, pp. 325-332.

Bonde, Ruth L. "Means and Ends." Consumer Credit in Family Financial Management. Proceedings of a National Workshop at University of Wisconsin, Oct. 9-12, 1967, Washington, D.C., American Home Economics Association, 1967, pp. 144-152.

Board of Governors. Federal Reserve System. Federal Reserve Bulletin, Vol. 61, No. 5, A 45 (May 1975) and Vol. 58, No. 10, A 56 (October 1972), Washington, D.C., United States Government Printing Office.

Brown, Kathleen H. "Social Class as an Independent Variable in Family Economics Research." Journal of Consumer Affairs, Winter 1969, pp. 127-136.

Duvall, Evelyn Millis. Family Development. Philadelphia: J. B. Lippincott Co., 1967.

Gayle, Mary A. "Relationship of Family Life Cycle Definitions to Family Financial Activities." Unpublished Ph.D. dissertation, Purdue University, 1966.

Gross, Irma H. and E. W. Crandall. Management for Modern Families. New York: Appleton-Century-Crofts, 1963.

Hendricks, Gary, and Kenwood C. Youmans, with Janet Keller. Consumer Durables and Installment Debt: A Study of American Households. Ann Arbor, Michigan, Survey Research Center, Institute for Social Research, University of Michigan, 1973.

Herrmann, Robert O. "Families in Bankruptcy--A Survey of Recent Studies." Journal of Marriage and the Family, Vol. 28, 1966, pp. 324-330.

Huber, Milton J. "A Profile of the Overextended Credit Family." Consumer Finance News, Vol. 49, May 1965, pp. 6, 7, 18-20, 22, 24-25.

_____. "A Study of Financially Overextended Families." Detroit, Michigan, Merrill-Palmer Institute, 1965.

Katona, George; William Dunkelberg; Jay Schmiedeskamp; and Frank Stafford. 1968 Survey of Consumer Finances. Ann Arbor, Institute for Social Research, 1969.

Kahl, Joseph A. and James A. Davis. "A Comparison of Indexes of Socio-Economic Status." American Sociological Review, Vol. 20, 1955, pp. 317-325.

Lansing, John B. and Leslie Kish. "Family Life Cycle as an Independent Variable." American Sociological Review, Vol. 22, October 1957, pp. 512-519.

Lansing, John B. and James N. Morgan. "Consumer Finances Over the Life Cycle." Consumer Behavior, Vol. II, Lincoln Clark (ed), New York, New York University Press, 1955, pp. 36-53.

Lawson, Edwin D. and Walter E. Boek. "Correlations of Indexes of Families' Socio-Economic Status." Social Forces, Vol. 39, December 1960, pp. 149-152.

Mandell, Lewis. Credit Card Use in the United States. Ann Arbor, Michigan: Institute for Social Research, University of Michigan, 1972.

Martineau, Pierre. "Social Classes and Spending Behavior." Journal of Marketing, Vol. 23, October 1958, pp. 121-130.

Mathews, H. Lee and John W. Slocum, Jr. "Social Class and Commercial Bank Credit Card Usage." Journal of Marketing, Vol. 33, January 1969, pp. 71-78.

Moore, Geoffrey H. and Philip A. Klein. The Quality of Consumer Installment Debt (Studies in Consumer Installment Financing, No. 13). New York, National Bureau of Economic Research, 1967.

Morse, Richard L. D. "Historical Development of Consumer Credit." Consumer Credit in Family Financial Management. Proceedings of a National Workshop at University of Wisconsin, Oct. 9-12, 1967, Washington, D.C., American Home Economics Association, 1967, pp. 20-26.

Nie, Norman H.; C. Hadlai Hill; Jean G. Jenkins; Karin Steinbrenner; Dale H. Bent. SPSS: Statistical Package for the Social Sciences. New York: McGraw Hill, Inc., 1975, (2nd ed.).

Reiss, Albert J. Jr.; Otis Dudley Duncan; Paul K. Hatt; and Cecil C. North. Occupation and Social Status. New York: The Free Press, 1962.

Ryan, Mary Ellen. "An Analysis of Economic and Demographic Characteristics of Consumers Associated with Excessive Installment Debt." Master's Thesis, University of Minnesota, 1968, (Published by Federal Reserve Bank of Minneapolis).

Scheffler, Joan; Richard Rice; and Judith Kaplan (eds.). Occupation Reference File Workbook. Ann Arbor, Survey Research Center, Institute for Social Research, University of Michigan, 1971.

Schlater, Jean (dir.). National Goals and Guidelines for Research in Home Economics. Study sponsored by Association of Administrators of Home Economics, East Lansing, Michigan, October, 1970.

Shaffer, Carol Warwick, "Income and Expenditure Patterns Related to the Life Cycle." Unpublished Ph.D. dissertation, Michigan State University, 1964.

Sheldon, Eleanor B. (ed.). Family Economic Behavior. Philadelphia: J. B. Lippincott Co., 1973.

Slocum, John W. and H. Lee Mathews. "Social Class and Income as Indicators of Consumer Credit Behavior." Journal of Marketing, Vol. 34, April, 1970, pp. 69-74.

Wasson, Chester R. "Is it Time to Quit Thinking of Income Classes." Consumer Behavior in Theory and in Action. Stewart H. Britt (ed.). New York: John Wiley and Sons, Inc., 1970, pp. 234-238.

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