

Credit card usage and consumer debt burden of households

CYNTHIA AAMLID WASBERG, TAHIRA K. HIRA* AND ALYCE M. FANSLOW† *Department of Family Environment and †Department of Family and Consumer Sciences Education, Iowa State University

*The primary objectives of this study were to examine changes in credit card usage and the amount of debt between 1982 and 1986 and to identify factors influencing the amount of and changes in consumer debt held by households. Personal interviews were completed in 1982 and again in 1986 with the money managers of households in a small midwestern town in the U.S.A. The sample consisted of the 123 households that were represented both in the 1982 and 1986 surveys. Paired-samples *t*-tests were used to identify changes over time. Significant differences were found between 1982 and 1986 total household assets and total amount of debt. Regression analysis indicated that significant predictors of the amount of consumer debt burden were age, net income, total assets, and the degree to which managers felt comfortable with debt. Younger money managers were more likely to make larger monthly debt payments and have more consumer debt. Households with larger incomes and higher levels of assets also had higher total debt. Significant predictors of change in debt burden over the 4-year period were change in net income and total assets, with year-end savings being negatively correlated with consumer debt.*

Introduction

In this study, credit card usage practices were examined in relationship to the amount of consumer debt held by households. In order to provide educators and financial counsellors with insights into reasons why some households experience debt, it is important that research is focused on examining both socio-economic and credit practices as they relate to household debt. Credit card usage is not only significant because of its macro-economic effect on supply and demand of money at the aggregate level, but also because it affects the micro-economic functioning of households and families. Knowledge of who uses credit cards and why is essential because degree of credit card usage affects total consumer debt.

Because credit is relatively abundant in our society, families and individuals can satisfy their consumer wants and needs instantly by utilizing the different forms of credit available on the market. In the late 1970s, outstanding consumer instalment credit increased sharply, after fairly moderate growth for 20 years. From 1980 to

Correspondence: Dr T. K. Hira, Professor, Department of Family Environment, Iowa State University, Lebaron Hall, Ames, Iowa 50011-1120, U.S.A.

1982, outstanding credit declined and grew less than 6%. Consumers were discouraged from borrowing because of high finance rates, a limited supply of credit, and uncertainty about employment and the economy due to the recessions of 1980 and 1981-1982.¹

The amount of credit increased dramatically after 1982, growing at an average of 18% each year until 1987.² Several factors were associated with this expansion. As finance rates declined, consumer demand for goods grew. The average maturities on consumer loans lengthened; repayments were stretched out which lowered payments while increasing the level of credit outstanding.³ In addition, the 25-34 and 35-44 age groups increased in numbers; these two groups added to the increased amount of consumer credit because they are more likely to borrow at this stage of the family life cycle.⁴

A study on factors affecting growth in consumer credit conducted by the National Business Council for Consumer Affairs identified the following factors: higher incomes, a general rise in the standard of living, more consumer goods on the market, wider acceptance of debt, and the marketing of new forms of credit.⁵ A more recent study of Pearce⁶ confirmed that the higher demand for credit has stemmed from an economic upturn since 1983. Employment and income outlooks were encouraging during this business expansion; therefore, households were more likely to borrow because of this confidence.⁷ Another report found that consumer attitudes were changing, which tended to increase spending and borrowing. Some luxury goods were being thought of as necessities, and consumers used instalment debt for more purposes.⁸

Credit cards were held by 71% of all U.S. families in 1986, and there had been no change in this proportion since 1984.⁹ Outstanding credit card debt has changed, however. In 1984, outstanding debt grew 26%, slowed to a 20% increase in 1985, and dropped significantly to only an 8% growth in 1986.¹⁰ However, credit card monthly charges were reported as 27% higher in 1986 than in 1984. The rise in monthly credit card charges may reflect an increase in the convenience use of credit cards.¹¹

Even with this increase in household borrowing, some suggest that households are not seriously overextended. Pearce¹² contends that a rise in the convenience use of credit cards, a lengthening in the average maturity of consumer loans, and an increase in the number of persons in the younger age groups who typically use more credit have exaggerated the debt burden of households. Whether consumers are overextended or not does not change the fact that credit is being used more often; therefore, knowledge about factors associated with the use of credit could prove helpful to those working with consumers.

Specific objectives of this study were: (i) to examine changes in credit card usage practices and amounts of debt over a 4-year period, (ii) to explore the relationships between credit card usage practices and socio-economic characteristics of credit users, and (iii) to determine factors affecting the amount of total household debt.

Previous research

The relationships between (i) socio-economic and demographic characteristics and (ii) consumer debt and credit card use have been examined by several researchers. Income was related positively to consumer debt.^{13,14} Households with higher incomes held more credit cards than households with lower incomes¹⁵ and used credit cards more frequently when making purchases.¹⁶ Younger households had more debt relative to their income and assets; debt-to-income ratios increased up to the age of 44 and then declined.¹⁷ Credit cards also were used more extensively by persons between 18 and 45 years of age.¹⁸

Households headed by college graduates were more likely to have greater consumer debt than households headed by persons who had never attended high school.¹⁹ Two-person households had more consumer debt²⁰ and held more credit cards than single-person households.²¹ Homeowners with an outstanding mortgage balance had a significantly higher probability of using consumer debt than homeowners without a mortgage balance.²²

Overall, households using credit had some liquid assets to cushion their use of credit.²³ In a 1983 national study in the U.S., about 70% of households that revolved their credit card balances had sufficient liquid asset balances to repay their total credit card debt. Only 4% held no liquid assets.

Attitudes toward credit usage have been found to affect borrowing behaviour. Consumers who had a positive attitude toward credit, and believed that credit was a good idea, were more likely to use credit for purchases than were those who had negative attitudes.^{24,25} Possession of credit cards was related positively to use of the card and expenditure levels.²⁶ Studies also have found that credit card stimuli at the site of payment increased the amount spent and decreased decision time before spending.^{27,28}

Mathews and Slocum²⁹ found that most credit card holders believed it was acceptable to purchase durable goods, some necessities, and services with credit. Lower socio-economic classes limited credit use to durables and necessity goods, whereas upper socio-economic classes purchased luxury goods with credit.

Heck,³⁰ using data from a 1977-1978 survey of consumer credit, discovered that the percentage of credit card holders who were actual users varied among card types. The important characteristics of households which affected the utilization of particular credit cards depended on the type of card involved. Ethridge³¹ found that method of payment of credit card purchases was related to selected socio-economic and attitudinal variables. Husband's occupation and income were two significant predictors of method of payment. Furthermore, those who made instalment payments on their credit card balance were more likely than convenience users to perceive difficulty in saving in advance for purchases of large consumer durables.

Three motivations have been identified that explain why consumers use credit cards rather than pay cash.³² First, cash may be unavailable so credit is needed to

purchase the goods or services. Second, credit cards offer the convenience of not carrying cash, especially large amounts of cash. Third, the consumer realizes that savings may result by buying the item now and paying later. Similar findings were reported by DeMuth.³³ He concluded that credit cards reduce the risks and financial costs of carrying large amounts of cash, provide convenience when purchasing by telephone or mail, and provide ease in maintaining records of purchases.

Method

The data used for this study were based on personal interviews conducted with money managers in households during 1982, and again in the autumn of 1986. Interviews were conducted by trained interviewers under the supervision of the Iowa State University Statistical Laboratory. The households were randomly selected from a midwestern town in the U.S.A. with a population of 27,000. The town offered a diversified sample because of its varied industrial and agricultural mix.

During the first phase of the study, interviews were conducted with money managers in 201 randomly selected households. The money manager, not necessarily the head of the household, was determined by asking 'who manages money in the household?' If the money management responsibilities were shared with a spouse, both were interviewed, and the person answering most of the questions was identified as the money manager. Due to missing information on a large number of items in some questionnaires, the usable sample size was reduced to 198. Four years later, 164 housing units from the original sample were located. The second phase produced 132 interviews. Of these, 123 provided usable data.

Fifty households who participated in the 1982 study were not included in the 1986 study because the money managers had moved to a nursing home (4), were deceased (6), moved out of the area (27) or were unlocatable (13). Nineteen households refused to participate in the second phase of the study.

Information for 123 households which were included in both interviews was paired for the purpose of analysis. All financial data for 1982 were adjusted for inflation by using the average inflation rate over a 4-year period. The data used for this paper are based on 123 households, in which the interviews were conducted with the same member of the household. Due to small sample size and geographical location, generalizability of the results will be limited.

Variables

Socio-economic characteristics of the money manager and credit card usage practices were treated as independent variables. Socio-economic characteristics included: age, income, housing tenure, total assets excluding real estate, and amount of annual income saved. Housing tenure was coded as renter (0) and

homeowner (1). Total assets was operationalized as the value of all assets owned by the household, including cheque account, savings or money market account, certificates of deposit, cars or vehicles, IRA (individual retirement accounts, for employees)/KEOGH (individual retirement plans for the self-employed), annuities, recreational equipment and personal possessions. Real estate was excluded because this study focuses on consumer debt. Table 1 provides a description of the variables.

Credit card practice variables were: number of credit cards used, use of credit cards when money was not available at the time of purchase, use of credit cards for easy borrowing, frequency of paying finance charges on credit cards, and amount of credit card debt with which households were comfortable. Variables measuring reasons for using credit cards (not enough money, easy borrowing) were coded as no (0) and yes (1). Responses for frequency of finance charge on credit cards were measured on a scale from 0-4, where never = 0, seldom = 1, sometimes = 2, usually = 3 and always = 4 (Table 1).

The amount of total consumer debt and monthly debt payment made by a household were the dependent variables. Consumer debt was defined as financial indebtedness carried by the household, excluding the mortgage. Total consumer debt was calculated by adding the amounts currently owed on credit and charge cards; home improvement and furnishing loans; car or other vehicle loans; educational loans; consolidation loans; outstanding hospital, medical, or dental expenses; loans on life insurance; and other personal or non-business loans. Monthly payments on these same debt types were added resulting in monthly debt payment; mortgage debt was excluded.

The preliminary stages of the analysis employed frequency analyses, paired-samples *t*-tests, cross tabulation and chi-square analyses, Pearson product-moment correlation analyses and regression analyses. Based on the results of these analyses and evidence from previous studies, 10 variables were retained for further analysis using regression. The five socio-economic variables retained were age of the money manager, net income, housing tenure, total household assets excluding real estate, and the amount of annual income saved. The five credit card practices selected were number of credit cards used, use of credit cards when money was not available for the purchase, use of credit cards for easy borrowing, frequency of incurring finance charges on credit cards, and amount of credit card debt with which the household was comfortable.

The study tested the following empirical model:

$$Y_1 \text{ and } Y_2 = a + \sum_{i=1}^5 b_i x_i + \sum_{j=1}^5 b_j x_j$$

where Y_1 = total consumer debt and Y_2 = monthly debt payment; where b_i = socio-economic characteristics (b_1 = age, b_2 = income, b_3 = housing tenure, b_4

Table 1. Description of socio-economic characteristics, credit card usage practices and total consumer debt

	1982*		1986	
	Mean	SD	Mean	SD
Age of money manager (yrs)	45.74	16.54	49.31	16.24
Net income (U.S. \$)	26,641.94	25,127.22	24,505.72	16,227.53
Housing tenure (0) renter (1) homeowner	0.87	0.34	0.89	0.32
Total assets (U.S. \$)	53,431.76	112,618.12	80,262.32	150,923.03
Year-end savings (U.S. \$)	2,641.69	4,672.43	3,282.80	6,046.81
Number of credit cards	2.22	2.02	2.29	2.13
Used credit cards because did not have money (0 = no; 1 = yes)	0.51	0.50	0.48	0.50
Used credit cards for easy borrowing (0 = no; 1 = yes)	0.27	0.45	0.30	0.46
Frequency of finance charge (0 = never; 1 = seldom; 2 = sometimes; 3 = usually; 4 = always)	1.65	1.45	1.66	1.47
Amount of credit card debts with which comfortable (U.S. \$)	430.19	791.72	658.67	792.50
Monthly debt payment (U.S. \$)	178.86	353.19	190.51	352.50
Total debt (U.S. \$)	3,287.10	7,893.91	9,420.36	32,547.30

*1982 values are in 1986 U.S. dollars.

= household assets, b_5 = amount saved); b_1 = credit card practices (b_6 = number of credit cards, b_7 = use of credit card when money not available, b_8 = use of credit card for easy borrowing, b_9 = frequency of finance charges, B_{10} = amount of credit card debt with which household was comfortable).

Results

The frequency analysis provided a descriptive profile of the households. In both 1982 and 1986, the majority of money managers were female; married; employed full-time in clerical, sales or service work; and owned their own homes. On average the median age was 41 years in 1982 and 46 years in 1986. On average, these households earned a net income of \$26,642 in 1982 and saved \$2,642 of their incomes; in 1986, net income averaged \$24,506, with \$3,282 of this saved. All 1982 values have been adjusted for inflation and represent 1986 U.S. dollars.

Credit card practices from both time periods revealed that most money managers did not use credit for large expenses, such as for household appliances, furniture or vacations. Further, most monthly payments were made as scheduled. The money manager's household had an average of two credit cards, and most did not incur finance charges on the credit cards. The mean total consumer debt, excluding real estate debt, was \$3,287 in 1982 and \$9,940 in 1986. Monthly debt payments, excluding mortgages, averaged \$179 in 1982 and \$191 in 1986. The values represent 1986 constant U.S. dollars.

The paired-samples *t*-test was used to compare variables across dependent samples, or samples using the same subjects; hence, the difference between the two time periods could be evaluated. The results of the paired-samples *t*-test revealed that there was a significant difference between 1982 and 1986 for three variables: age of the money manager, total assets excluding real estate, and total debt excluding real estate (Table 2). The difference in the mean age of the money manager was expected because the same managers were surveyed in 1982 and again in 1986. The mean value of total assets was \$53,432 in 1982 and increased to \$80,262 in 1986 (1986 constant U.S. dollars). The mean total debt held by households increased by about \$6,000 over the 4 years, from \$3,287 to \$9,420, adjusted to 1986 dollars. The significant difference between the two time periods was expected because of the reported increase in consumer debt in the literature.

There was no significant difference between the number of credit cards held or the reasons for using credit cards over time. Even with a higher mean total debt, most households did not incur finance charges more frequently or increase their total monthly debt payment to a significant extent between the 4 years. Finance charges were measured on credit cards only and did not reflect a total view of the household's situation.

Correlations between socio-economic characteristics and credit card practices are reported in Tables 3 and 4. In both 1982 and 1986, the use of credit cards for easy borrowing and to purchase items when funds were not available decreased

Table 2. Paired-samples *t*-test for socio-economic characteristics, credit card usage practices and total consumer debt

	<i>t</i> -value
Age of money manager	12.66***
Net income	-1.21
Housing tenure	-1.29
Savings	1.42
Total assets	3.29***
Number of credit cards	0.46
No money for purchases	-1.15
Easy borrowing	0.20
Frequency of finance charge	-0.88
Comfort with credit card debt	1.54
Monthly debt payment	0.21
Total debt	2.20*

*Significant at the 0.05 level.

***Significant at the 0.001 level.

Table 3. Correlation of socio-economic characteristics of credit users with credit card usage practices in 1982

	Age	Housing tenure	Total assets	Net income	Savings
Number of credit cards	0.081	-0.269***	0.049	0.202*	0.103
No money for purchases	-0.332***	0.076	-0.269***	-0.01	-0.361***
Easy borrowing	-0.277**	0.218*	-0.12	0.191*	-0.038
Frequency of finance charge	-0.343***	-0.034	-0.273**	-0.033	-0.236**
Comfort with credit card debt	-0.111	-0.041	0.143	0.291**	0.381***

*Significant at the 0.05 level.

**Significant at the 0.01 level.

***Significant at the 0.001 level.

Table 4. Correlations between socio-economic characteristics of credit users with credit card usage practices in 1986

	Age	Housing tenure	Total assets	Net income	Savings
Number of credit cards	0.007	-0.241**	0.079	0.279***	0.139
No money for purchases	-0.477***	0.100	-0.310***	-0.106	-0.269**
Easy borrowing	-0.256**	0.208*	-0.190*	0.207*	-0.045
Frequency of finance charge	-0.413***	-0.210*	-0.353***	-0.133	-0.331***
Comfort with credit card debt	-0.050	-0.127	0.147	0.302**	0.020

*Significant at the 0.05 level.

**Significant at the 0.01 level.

***Significant at the 0.001 level.

with age. Similarly, payment of finance charges on credit card balances decreased with age (Tables 3 and 4).

Homeowners were more likely than renters to use more credit cards in both time periods. In 1982 and 1986, renters were more likely to use credit cards as an easy way to borrow money. Renters also were more likely than homeowners in 1986 to pay higher finance charges on credit cards (Tables 3 and 4).

In both time periods, total assets was correlated with frequency of incurring finance charges and using credit cards for purchases when money was not available. Use of credit cards for purchases when funds were not available and payments of finance charges on credit card balances decreased as the amount of total household assets increased. In 1986, credit cards also were more likely to be used for easy borrowing by households with less assets (Tables 3 and 4).

Both in 1982 and 1986, the number of credit cards held increased with greater income. Similarly, the amount of credit card debt with which respondents were comfortable increased as household net income increased. A positive relationship between higher incomes and using credit cards for easy borrowing was found in both 1982 and 1986 (Tables 3 and 4).

In both time periods, the use of credit cards because of lack of money to purchase an item and frequency of paying finance charges decreased with increase in amount of savings. In 1982 a positive relationship was found between the savings and amount respondents felt comfortable owing on credit cards at one time (Tables 3 and 4).

Table 5 shows the results of regressing monthly debt payment on the socio-economic and credit card use variables. When using the averages between 1982

Table 5. Regression of total consumer debt payment on socio-economic characteristics and credit card usage practices

Variable	Average		Difference (1986-1982)	
	Beta	t	Beta	t
Age of money manager	-0.17	-2.08*	-0.12	-1.62
Net income	0.70	8.79***	0.63	8.50***
Housing tenure	0.09	1.31	-0.10	-1.46
Total assets	-0.07	-0.88	0.45	5.87***
Year-end savings	-0.05	-0.66	-0.18	-2.59*
Number of credit cards	0.06	0.97	0.04	0.59
No money for purchases	0.09	1.17	-0.13	-1.74
Easy borrowing	0.01	0.07	0.07	1.04
Frequency of finance charge	-0.00	-0.03	-0.00	-0.05
Comfort with card debt	0.23	3.15**	-0.13	-1.76
<i>R</i> -square = 0.73; <i>F</i> = 19.78; <i>P</i> ≤ 0.0001.		<i>R</i> -square = 0.70; <i>F</i> = 16.5; <i>P</i> ≤ 0.0001.		

*Significant at the 0.05 level.

**Significant at the 0.01 level.

***Significant at the 0.001 level.

and 1986, the variables explained 73% of the variance in average monthly debt payment. The overall *F*-value of 19.78 was significant beyond the 0.0001 level. Three of the independent variables contributed in a statistically significant way to explaining the variation in the average monthly debt payment. Households with a higher level of net income and managers who felt comfortable owing a larger amount on all credit cards at one time had larger monthly debt payments. Size of monthly debt payments decreased with age. Findings support those of Pearce²⁴ who reported that younger households held more debt.

Monthly debt payments increased slightly between 1982 and 1986 on average (see Table 1). Seventy per cent of the difference in monthly debt payments in the two time periods was explained by the variables, as shown in the regression analysis (Table 5). An *F*-value of 16.5 was significant beyond the 0.0001 level. Income, year-end savings and total assets were significant predictors of the difference in monthly debt payments between 1982 and 1986. Size of monthly debt payments increased with increase in household's net income and level of total assets. Monthly debt payments also increased with decrease in the level of year-end savings.

The regression results of total consumer debt on socio-economic characteristics

of the money manager and credit card use practices are reported in Table 6. An *R*-square value of 0.51 indicated that 51% of the variation in average total debt is explained by a combination of socio-economic characteristics and credit card use practices. The *F*-value of 7.43 was significant beyond the 0.0001 level. Age and total assets were the two variables statistically significant. The size of total household debt increased with increase in the level of total assets excluding real estate. Age of the money manager was negatively related to total debt; the amount of total consumer debt decreased with age.

The regression results of the difference between 1982 and 1986 of total debt on the selected variables showed an overall *F*-value of 5.62, significant beyond the 0.0001 level (Table 6). The socio-economic characteristics and credit card use practices explained 44% of the variation in total debt between 1982 and 1986, indicated by an *R*-square value of 0.44. Two socio-economic variables were statistically significant in explaining the difference in total debt. The size of total consumer debt decreased with increase in level of year-end savings. On the other hand, the amount of total consumer debt increased with increase in level of assets. These findings support those of Sullivan²⁵ who found that households using consumer credit possessed considerable asset balances.

Table 6. Regression of total consumer debt on socio-economic characteristics and credit card usage practices

Variable	Average		Difference (1986-1982)	
	Beta	t	Beta	t
Age of money manager	-0.33	-2.97**	-0.12	-1.21
Net income	0.14	1.32	0.05	0.54
Housing tenure	0.12	1.36	-0.06	-0.60
Total assets	0.39	3.58**	0.65	6.24***
Year-end savings	0.18	1.71	-0.21	-2.27*
Number of credit cards	0.01	0.16	0.09	0.94
No money for purchases	0.11	1.13	-0.14	-1.40
Easy borrowing	-0.12	-1.10	0.01	0.12
Frequency of finance charge	-0.08	-0.75	0.05	0.46
Comfort with card debt	0.14	1.42	0.05	0.48
<i>R</i> -square = 0.51; <i>F</i> = 7.43; <i>P</i> ≤ 0.0001.		<i>R</i> -square = 0.44; <i>F</i> = 5.62; <i>P</i> ≤ 0.0001.		

*Significant at the 0.05 level.

**Significant at the 0.01 level.

***Significant at the 0.001 level.

Conclusions and implications

This study used data from two time periods to test the relationship of the amount of consumer debt held by a household over time with socio-economic characteristics and credit card use practices. The results of the study provided evidence that socio-economic characteristics of credit card users tended to be more significant predictors of monthly debt payment and total debt than credit card practices. Specifically, age of the money manager, income, and total assets and amount of credit card debt with which money managers were comfortable were strong predictors of consumer debt over time. The results further indicated that increases in monthly debt payments and total debt from 1982 to 1986 could be explained by changes in income, savings and total assets. The reasons for use of credit cards and the number of credit cards held did not influence consumer debt in this study. Generalizing the results of this study should be done cautiously because of the limited geographical area of the study and the relatively small size of the sample. Further, the results of the study on consumer debt are relevant only to credit card holders.

The findings of the study can be useful to educators and financial counsellors in their efforts to help families and individuals with credit use practices and debt management. Younger households continue to use credit more than older households because of their stage in the life cycle and their lower financial reserves. This information can help educators on both the high school and college levels to prepare young people to use credit more effectively. Special emphasis should be placed on teaching skills in using credit cards effectively. Young married couples, who are more likely to experience stress from combining financial management styles, are also an appropriate target population. Because young married couples have substantial need for credit, targeting them with educational efforts in financial and credit management can be especially worthwhile; prudent financial management seems to be a factor in achieving a healthy lifestyle.

The results of this study indicated that credit card usage practices, such as the number of credit cards carried, were not in themselves problematic. These usage practices were not associated with greater consumer debt levels or monthly payments. Rather, the overall economic circumstance of the household was significant in explaining the consumer debt burden. Total household debt should be viewed in relationship to the household's stage of the life cycle. The stage of the life cycle influences not only the need for borrowing but also the level of income and level of assets. Size of total debt in itself is not important; rather, the size of total debt should be assessed in relationship to household income and assets available to support the debt.

Younger money managers borrowed more and used credit cards to purchase items for which they did not have money. They also paid finance charges more frequently. These results emphasize the importance of educating younger adults

on concepts such as debt-to-income ratio, debt-to-asset ratio, cost comparisons and alternative methods of borrowing. Consumer credit is an essential aspect of households' finances, and credit card use is a popular and convenient method of borrowing. Educators and counsellors need to focus on helping people to learn how to use credit cards effectively given the individual's financial situation.

Future studies should compare the debt level of credit card holders with those who do not have or use credit cards. Additionally, research could include the influence of home equity loans on consumer debt, as these have become more popular and are used to finance consumer debt.

References

1. Tapsco, T.R. (1985) Consumer installment credit, 1980-85. *Survey of Current Business*, 65, 12-16.
2. Avery, R.B., Ellichhausen, G.E. & Kennickell, A.B. (1987) Changes in the consumer installment debt: evidence from the 1983 and 1986 surveys of consumer finance. *Federal Reserve Bulletin*, 73, 761-778.
3. Tapsco, T.R., *op. cit.*
4. Lockett, C.A. & August, J.D. (1985) The growth of consumer debt. *Federal Reserve Bulletin*, 71, 389-402.
5. Horner, A. (1981) *Credit Counselor Training Handbook* 3rd edn, pp. 2-6. Credit Counseling Center, Soughfield, Michigan.
6. Pearce, D.K. (1985) Rising household debt in perspective. *Economic Review*, 70, 3-17.
7. *Ibid.*
8. Lockett, C.A. & August, J.D., *op. cit.*
9. Avery, R.B., Ellichhausen, G.E., Kennickell, A.B. & Spindt, P.A. (1987) Changes in the use of transaction accounts and cash from 1984 to 1986. *Federal Reserve Bulletin*, 73, 179-196.
10. Slater, C. (1987) The pause that refreshes. *American Demographics*, 9, 4-6.
11. Avery, R.B. *et al.*, *op. cit.*
12. Pearce, D.K., *op. cit.*
13. Bloom, D.E. & Steen, T.P. (1987) Living on credit. *American Demographics*, 9, 22-29.
14. Canner, G.B. & Fergus, J.T. (1987) The economic effects of proposed ceilings on credit card interest rates. *Federal Reserve Bulletin*, 73, 1-13.
15. Kinsey, J. (1981) Determinants of credit card accounts: an application of tobit analysis. *Journal of Consumer Research*, 8, 172-182.
16. Canner, G.B. & Fergus, J.T. *op. cit.*
17. Pearce, D.K., *op. cit.*
18. Peterson, R.L. (1977) Factors affecting the growth of bank credit card and check credit. *The Journal of Finance*, 32, 553-564.
19. Bloom, D.E. & Steen, T.P., *op. cit.*
20. *Ibid.*
21. Kinsey, J., *op. cit.*
22. Sullivan, A.C. & Worden, D.D. (1986) *Economic and Demographic Factors Associated with Consumer Debt Use*. Working Paper No. 52. Credit Research Center, Purdue University, Lafayette, Indiana.
23. Sullivan, A.C. (1987) *Liquid Assets and Consumer Credit on the Household Balance Sheet*. Working Paper No. 53. Credit Research Center, Purdue University, Lafayette, Indiana.
24. Sullivan, A.C. & Worden, D.D., *op. cit.*

25. Slocum J.W. Jr. & Mathews, H.L. (1970) Social class and income as indicators of consumer credit behavior. *Journal of Marketing*, **34**, 69-74.
26. Hirschman, E.C. (1979) Differences in consumer purchase behavior by credit card payment system. *Journal of Consumer Research*, **6**, 58-66.
27. Feinberg, R.A. (1986) Credit cards as spending facilitating stimuli: a conditioning interpretation. *Journal of Consumer Research*, **13**, 348-356.
28. Feinberg, R.A., Rummel, A.P. & Mataro, L.A. (1983) Applied research on a classical conditioning model of credit card facilitated spending. In *American Council on Consumer Interest Proceedings*. (Ed. by K. Goebel) pp. 236-239. Kansas City, University of Missouri, Columbia.
29. Mathews, H.L. & Slocum, J.W., Jr. (1969) Social class and commercial bank credit card usage. *Journal of Marketing*, **33**, 71-78.
30. Heck, R.K.Z. (1987) Differences in utilization behavior among types of credit cards. *Service Industries Journal*, **7**, 42-63.
31. Ethridge, V. (1982) Factors related to credit card users on basis of method of repayment. *Home Economics Research Journal*, **10**, 293-356.
32. Ingene, C.A. & Levy, M. (1982) Cash discounts to retail consumers: an alternative to credit card sales. *Journal of Marketing*, **46**, 91-103.
33. DeMuth, C.C. (1986) The case against credit card interest rate regulation. *Yale Journal on Regulation*, **3**, 201-242.
34. Pearce, D.K., *op. cit.*
35. Sullivan, A.C., *op. cit.*