

# CREDIT CARD USAGE BEHAVIOR: SOME INSIGHTS FROM NOVA SCOTIA, CANADA

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## Abstract

This article presents the results of an empirical study of Nova Scotian Consumers' attitudes and behavior toward credit buying and the role credit cards play as a facilitatory tool in consumer goods purchasing. Socio-economic profiles of a sample of current credit card users are developed. The managerial implications of shopping with credit cards are discussed for orderly future marketing strategy formulation purposes. This study and its methodology could be replicated in other parts of the country for the purpose of generalizations.

## Introduction

In recent years, as a result of consumer economy, there has been a rapid growth in the use of credit card plans in developed countries of the world. In North America, cheque and credit card payments have replaced cash payments considerably. According to an estimate in 1980, Canadians spent some 30 billion dollars by use of different credit cards. This means that each Canadian owes an average of \$1,250 for credit purchases a year. Since very few teenagers have credit cards, the actual household debt figure is more likely to be around \$3,300. Among the available credit cards, bank credit cards play the most crucial role.

So far, credit card usage behavior has been studied mainly in the U.S.A. (Kinsey, 1981). Understanding and fulfilling credit card users' needs are the essence of building retail patronage. Also, credit is widely regarded as an important element in the retailer's merchandising strategy, particularly as a form of service competition (Duncan, Phillips and Hollander, 1972). In spite of its growing importance in the retailers marketing mix, there have been relatively few published studies which have addressed themselves to credit card use behavior (Morgan, 1968; Mathews and Slocum, 1969; Gobel, 1969; Solcum and Mathews, 1970; Plummer, 1971; Levy, 1973; Etzel, 1974; Awh and Waters, 1974). Studies related to Canada are virtually non-existent and few studies have been done in Canada on how Canadians handle credit cards.

Research studies conducted on credit card usage behavior have, so far, tried to identify demographic, social class and attitudinal dimensions of users of credit. Additional studies looked at life-style (psychographic) dimensions of credit users. Activity-Interest-opinion (AIO) measures were found important factors in differentiating between credit card users and non-users as well as between female and male consumers (Hawes, Blackwell and Talarzky, 1976). Adcock et al (1977) have found that bank credit card users differ significantly from non-users with regard to a number of demographic characteristics. Bank card users were found more likely than non-users to have middle or upper-middle incomes, to be better educated, to be middle-aged or older, to be married, and to be males.

## Purpose of the Study

Credit cards are being used by more Canadian consumers in their purchasing efforts than ever used before. Because of the steady increase in the users of credit

cards, the study of card users' behavior has become an important study area in consumer behavior. The purpose of this article is to provide insights into the characteristics and attitudinal orientations of Nova Scotian credit card holders. The question of interest to us in this paper is whether the profile of current credit card users of Nova Scotia shows any significant differences from the profile of the groups studied earlier by Plummer (1971) and Adcock (1977). The ability to develop a profile of credit card users will provide additional knowledge about the Canadian consumer behavior. This will, in turn, suggest action-oriented marketing strategies for both financial institutions as well as retailers to use in order to obtain and maintain an increasing number of customers for their goods and services as well as improve the profitability of their operations.

This study reports the types of credit cards held by Nova Scotians and the extent and frequency of use of different brands of credit cards by card holders. More specifically, the study tries to address to three major research questions. First, are credit cards used primarily for their "convenience" value or primarily for the "borrowing" purposes? Second, to what extent do Nova Scotians use credit cards and what are their attitudes toward owning and using cards. Finally, what will be the size and extent of credit card use behavior among Nova Scotians in the future.

## Research Methodology

### Sample

The data for the study were collected through self-administered questionnaires in March 1981. The population of Halifax was 267,990 in 1979 of which 51 percent were female. The city is served by a variety of retail stores and financial institutions including 53 commercial banks in 1978. Questionnaires were hand distributed to a sample of 200 households living in the Spryfield area of Halifax, Nova Scotia, Canada. The study area is very cosmopolitan in nature, where there are households with diverse socio-economic and cultural backgrounds. These characteristics of the area lend more internal validity to the research results. Similar type of surveys were conducted among the same community with very successful results in the past (Kaynak and Yavas, 1982). An adult member of the household was asked to complete the questionnaire. After a one-week period, questionnaires were personally retrieved. A total of 144 usable questionnaires were returned allowing a 72 percent overall response rate. Of these, 140 questionnaires were completely filled out and therefore comprised the usable sample.

The sex, age, income, and occupation profile of the respondents are presented in [Table 1](#). The profile analysis of the card users indicate that they are predominantly female (69%), over two thirds of them are under the age of 40 years old, a majority of them being younger than 30 years of age. Income distribution of card holders was even and the most widely mentioned two occupations were managerial administrative positions

Credit Card Possession and Use by Nova Scotia Consumers

Method of Analysis

The method of analysis used in this research study was an R-Factor analysis on the data on the 42 variables identified as influencing credit card use behavior. The results of the measurement were initially used to produce a correlation matrix of the Spearman (non-parametric) type. These were then factor analysed using the principal components method. The technique was also successfully used in similar studies as a reliable method of analysis (Mukherjee, 1965, Kerby, 1979 and Sampson et al, 1979). This method enables the reduction of the variables (criteria) to a smaller set of independent factors which provide an indication of the intercorrelation between the large number of variables.

At a later stage, the effect of 42 variables were considered. This is illustrated in terms of Varimax analysis, one of the more popular forms of orthogonal factor analysis. It consists of first extracting a certain number of principal components and then transforming these linearly - "rotating" so that the larger loadings are made as large as possible and the smaller ones as near to zero as possible (Chakrapuni and Ehrenberg, 1980). This process is to facilitate more clear-cut interpretation of the factor variables in terms of the observed variables on which they are most highly loaded.

TABLE 1

Socio-Economic Profile of Credit Card Holders of Nova Scotia

Characteristics	Total Number	% Breakdown
<b>Sex</b>		
Male	45	30.2
Female	95	69.8
Total	140	100
<b>Age</b>		
Less than 20 years old	10	7.0
21-30	83	59.3
31-40	24	17.1
41-50	19	13.6
51-60	3	2.1
Not Specified	1	0.9
Total	140	100.0
<b>Income</b>		
Less than \$10,000	49	35.0
\$10,001 to \$15,000	32	22.9
\$15,001 to \$20,000	18	12.8
\$20,001 to \$25,000	23	16.4
\$25,001 to \$35,000	10	7.1
\$35,001 to \$45,000	2	1.4
More than \$45,000	6	4.4
Total	140	100.0
<b>Occupation</b>		
Student	14	10.0
Housewife	56	40.0
Teacher	16	11.4
Managerial/Professional	32	22.9
Secretary	4	2.8
Labourer	2	1.4
Nurse	16	11.5
Total	140	100.0

Findings

Study results indicated that some 99 of the respondents (70.7%) in this sample of respondents own some type of credit card(s). An average card ownership and use was 2.12. Of the total 15 different type of credit cards mentioned, the most common type owned is Visa Card and the second most important type is retail store credit cards such as Simpsons and Sears, followed in popularity by Master Card and gasoline company credit cards. Credit card ownership by sample Nova Scotians as well as purpose of use is shown in Table 2.

Credit Card Brands	Respondents own*		Used for purchasing* Goods and Services		Used for other Purposes	
	Number	%	Number	%	Number	%
Master Card	30	10.0	19	8.7	17	18.7
Visa	75	25.2	63	28.9	44	48.4
Simpsons	45	15.1	33	15.1	8	8.8
Sears	36	12.1	23	10.6	6	6.5
Eaton	26	8.8	21	9.6	2	2.2
Mill Brothers	18	6.1	16	7.3	2	2.2
K-Mart	--	----	--	----	--	----
Woolco	11	3.7	7	3.2	2	2.2
Zellers	5	1.7	1	----	--	----
Gasoline Company Cards (Shell, Texaco)	35	11.8	20	9.2	5	5.5
Others (American Express, Dinner's Club, Carte Blanche)	16	5.5	15	6.8	5	5.5
Total	297	100.0	218	100.0	91	100.0

Average Card ownership and use 2.12 1.56 0.7

\*Total numbers exceed the total number of respondents. The reason for this is some respondents own and use more than one credit card.

Most of the respondents, some 37 percent, paid up to 20 percent of their total purchases by credit cards and another 25 percent used their credit cards for other purposes such as a means of identification. Besides these, 19 percent paid between 21 to 40 percent of their total monthly purchases by credit cards and 12 percent between 41 to 60 percent of their monthly purchases; 4 percent paid 61 to 80 percent and only a mere 1½ percent of credit card holders paid 81 to 100 percent of their total monthly purchases after the 21 days grace period was over. This means that more people are paying less on their monthly statements from Visa, Master Charge, American Express, gasoline, retail stores and other cards.

The differences in distribution of credit cards between male and female card holders are small for the most common types of credit cards. On the whole, women reported more often possession of department store cards and Master Card than than are men. Men, on the other hand, have a higher possession of gasoline company cards and Chargex-Visa cards and Canadian Tire card. Under others category, cards like American Express, Dinner's Club, and Carte Blanche are found to be owned by male respondents only.

Attitudes Toward Credit Card Usage

Respondent's attitudes toward credit card as a concept and to its use were delineated by using attitudinal statements (see Table 3). Respondents rated of their agreement or disagreement with the statement on a five point Likert type of scale.

Majority of the respondents believed credit cards' usefulness. They thought credit cards are more convenient than cash or cheque; increase impulse purchases; tempt consumers to buy things they may not really need; and increase the total consumer debt without consumers realizing it. On the other hand, some respondents disagreed with the statement of majority of shopping is done by credit cards and credit cards are used for travelling. Also, respondents were indifferent toward those statements: credit cards are more convenient than cash, payment made within 30 days and credit buying never represent what you really owe. (Table 3). Most respondents are aware of how easy it is to run up "hidden" bills by using a credit card. On

the other hand, when cash is tight a card can get an item now for which payments may be stretched over weeks or months.

TABLE 3

Selected Attitudinal Statements of Nova Scotian Card Owners Concerning Credit

Statements <sup>a</sup>	Neither Agree Nor Disagree			Strongly Agree
	Strongly Disagree	Disagree	Agree	
Credit cards are useful.				4.18
The majority of shopping is done through the use of credit cards.	2.24			
Credit cards are more convenient than cash or cheque.			3.26	
For safety purposes credit cards more convenient than cash.				3.57
For safety purposes credit cards more convenient than cheques.		2.89		
One makes more impulse purchases while shopping with credit card.				3.56
Credit cards make it too easy to buy things one may not really need.				3.73
Use credit cards for travelling purposes only.	2.39			
Credit card payments are made within 30 days.				3.30
Credit cards never represent what you really owe.			3.26	
Everyday the total of debt rises through the use of credit.				3.71

<sup>a</sup>Ratings are based on a five point scale, where 5=Strongly agree, 4=Agree, 3=Neither agree nor disagree, 2=Disagree, 1=Strongly disagree.

Factor Analysis Results

When the data was analyzed by using Factor analysis technique some ten factors emerged which had eigen value of above 1.0. The cut-off point for factor loading was 0.50. Therefore, each cluster of factors consisted of a number of variables which has weight of 0.50 or higher in explaining the relationship between observed variable and common factor. Factor loading matrix was rearranged so that the columns appear in decreasing order of variance explained by factors. The rows were rearranged so that for each successive factor, loadings greater than 0.50 appear first. Loadings less than 0.25 was replaced by zero. Sorted rotated factor loadings (pattern) are shown in Table 4. The following paragraphs identify each cluster of factors so as to interpret the findings of this research.

**Factor 1:** This factor is heavily loaded on six attributes. These variables are purchased by Visa, Visa owner, Visa user, prefer Visa, and payment within 30 days and use Visa for identification. This factor could be labelled as Visa Card holders. These people have preference for Visa over other bank cards because they feel Visa is accepted by more retail outlets and service institutions. Visa card holders of Nova Scotia are predominantly males. The first factor has an eigen value of 4.3

**Factor 2:** The second factor may be named as high-income shoppers and had an eigen value of 3.7. High-income shoppers of Nova Scotia own Eaton and Simpson's cards and carry them for the purpose of purchasing goods and services in both stores.

**Factor 3:** This factor could be labelled as Convenience Factor. The examination of this factor indicated to us that the majority of the Nova Scotia credit card owners preferred using them, because they were more

convenient than using cash or cheques. Another reason mentioned was credit cards' safety value. Even if a credit card owner loses his/her card, he/she is protected against misuse of the card. This factor had an eigen value of 3.4

**Factor 4:** This factor included Master Card owners. As it was pointed out before Master Card owners preferred the card for purchasing goods and services as well as used it for the purpose of identification. This factor had an eigen value of 2.9.

**Factor 5:** Woolco Card owners.

**Factor 6:** This factor showed that credit card owners who possess Sears, Simpson and Eaton's cards also use them as a means of identification.

**Factor 7:** Mill's Brothers card owners. This group of people are also high-income earners and use their cards only for the purchase of specialty clothing.

**Factor 8:** This factor is associated with convenience value of owning credit cards. Respondents generally felt that credit card ownership makes shopping too easy. It encourages consumers to buy goods which they may not really need. Credit card ownership also increases impulse buying.

**Factor 9:** Zellers credit card owners.

**Factor 10:** This factor is related to debts of credit card owners. The survey results indicated that purchases done by credit cards usually do not represent what the credit card owners owe to retailers. Credit card use for the purpose of purchase increases consumers' debt every day without the owner realizing it.

Summary and Conclusions

The study results indicated that Nova Scotia credit card owners are mostly females. They show certain distinct socio-economic and demographic characteristics. Most respondents are under the age of 30, earn less than \$20,000 per person. The respondents mostly had managerial, professional type of jobs and a large percentage were housewives, meaning that their husbands were income earners.

Nova Scotians have certain beliefs about the function of credit and its apparent effects on their purchase patterns. The sample Nova Scotian card owners attach more importance to the "convenience" value of credit cards than their "borrowing" characteristic. Most of them are in the opinion that credit card ownership tempt the owner to purchase goods and services he/she does not really need.

Analysis of the survey data indicated that credit card owners, on the whole, preferred Visa for 30 days pay period and they were largely males. As far as department store card ownership is concerned, high-income group people tend to possess more Simpsons and Eaton's cards, whereas low income group people possessing Sears cards. Most of the bank credit card holders (e.g. Visa, Master Card, etc.) use their cards to purchase goods and services and very few of them use their bank credit cards for the purpose of receiving cash advances.

Mean credit card ownership was 2.12. Of this, some 73 percent used their credit cards for the purpose of purchasing goods and services. One out of two respondents possessed Visa, and one out of three owned Simpson,

TABLE 4

Sorted Rotated Factor Loadings (Pattern)

	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	FACTOR 5	FACTOR 6	FACTOR 7	FACTOR 8	FACTOR 9	FACTOR 10
PURSVISA 12	0.805	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
VISA 3	0.786	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CARDOWN 1	0.727	0.000	0.264	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OTHRVISA 21	0.592	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OTHERS 7	0.584	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PAYJODAY 36	0.549	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-0.399	0.000
PURJSEIM 15	0.000	0.800	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PURSTIMS 13	0.000	0.751	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EATONS 6	0.000	0.696	0.000	0.262	0.000	0.000	0.000	0.000	-0.271	0.000
SIMPSONS 4	0.321	0.589	0.000	0.000	0.000	0.000	0.000	0.000	0.339	0.000
INCOME 41	0.319	0.535	0.000	0.000	0.000	0.000	0.000	0.000	0.279	0.000
CONVMENT 30	0.000	0.000	0.791	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SAFECHCK 22	0.000	0.000	0.766	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAJORITY 29	0.254	0.000	0.665	0.000	0.000	0.000	0.263	0.000	0.000	0.000
SAFECASH 31	0.000	0.000	0.633	0.000	0.000	0.000	0.000	0.000	0.000	0.000
USEFUL 28	0.303	0.000	0.614	0.000	0.000	0.000	0.000	0.000	0.000	0.413
PURSHSTR 11	0.000	0.000	0.000	0.823	0.000	0.000	0.000	0.000	0.000	0.000
MSRCARD 2	0.000	0.358	0.000	0.787	0.000	0.000	0.000	0.000	0.000	0.000
OTHRMSTR 20	0.000	0.000	0.000	0.629	0.435	0.000	0.293	0.000	0.000	0.000
GOOLCU 9	0.000	0.000	0.000	0.000	0.847	0.000	0.000	0.000	0.000	0.000
PURMUCO 18	0.000	0.000	0.000	0.000	0.825	0.000	0.000	-0.258	0.000	0.000
OTHRSEAR 23	0.000	0.000	0.000	0.000	0.000	0.873	0.000	0.000	0.000	0.000
OTHRSTMP 22	0.000	0.000	0.000	0.000	0.000	0.738	0.000	0.257	0.000	0.000
OTHRRETON 24	0.000	0.000	0.000	0.000	0.000	0.676	0.000	0.000	0.000	0.000
PURSMILL 17	0.000	0.000	0.000	0.000	0.000	0.000	0.935	0.000	0.000	0.000
MILLS 8	0.000	0.000	0.000	0.000	0.000	0.000	0.897	0.000	0.000	0.000
EASYSHOP 34	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.757	0.000	0.000
IMPLSCRD 33	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.718	0.000	0.000
PURSOTHR 16	0.367	0.000	0.000	0.000	-0.260	0.000	0.000	0.563	0.000	0.000
ZELLERS 10	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.705	0.000
PURSZELL 19	0.000	0.000	0.252	-0.261	0.376	0.000	0.000	0.000	0.546	0.250
NOREPRST 37	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MICHDEPT 38	0.000	0.000	0.000	0.000	0.000	0.000	-0.251	0.000	0.000	0.675
VP	4.337	3.717	3.449	2.890	2.763	2.753	2.654	2.220	2.146	1.818

Sears and gasoline company credit cards. Master Card ownership ratio is not that high among Nova Scotia respondents, only 21 percent of them owning it.

Although credit card ownership ratio is high among the respondents; but very few of the cards owned are used on a continuous basis. Those retail stores as well as financial institutions wanting to increase credit card usage rate among the Nova Scotia public should develop marketing policies designed to increase credit card usage behavior by existing customer segments. To be able to do this, more marketing effort on the part of credit card supplier is needed. Promotional strategies should emphasize on the convenience value of credit card usage. Second, marketing policies are needed to attract credit card customers from one financial institution or retail store to another. Here, the advantages and benefits of owning and using different bank card or retail store credit card need to be emphasized. Third, financial institutions as well as retail stores could promote their respective credit cards among Nova Scotians as a means of marketing other services offered by them.

#### Further Research Avenues

This study looked at the credit card use behavior of respondents who reside in metro Halifax. Additional studies could look at the behavior of rural as well as respondents from other provinces. One can also hypothesize a distinct use behavior differences between French and English Canadian credit card owners and users and test it. In this research, the objective was to examine the characteristics credit card owners and users. Future studies could segment the credit card users market into light, medium and heavy market segments. Further insights are needed into the attitudinal orientations of heavy credit card users. This is the group, most commercial banks and department stores should aim their credit card promotional strategies and policies at. In particular, attempts need to be made to identify the distinctive needs, media and characteristics of different segments of the credit card market.

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