The Impact of Demographic, Socio-economic and Behavioral Characteristics on Attitudes Toward Credit Cards in Macedonia

Anita Ciunova-Shuleska

University "Ss. Ciryl and Methodius", Faculty of Economics
Krste Misirkov bb, Skopje, Republic of Macedonia
e-mail: anita@eccf.ukim.edu.mk

Abstract: *Credit cards have become an important part of everyday life without which lot of people can not imagine their life. The aim of this paper is to reveal the demographic, socio-economic and behavioral differences in credit cards attitudes in Macedonia. First, attitudes toward payment cards were examined by employing factor analysis. The reliability of the scale was examined using the Cronbach' alpha. The respondents were administered the 12-item version of the credit card attitude scale and asked questions regarding their demographic, socio-economic and behavioral characteristics. ANOVA test was used to reveal the gender and age (demographic) differences, income and household type (socio-economic) differences and behavioral (number of credit cards owned, period of ownership, payment of balance and usage frequency) differences in components of credit cards attitudes. The results of factor analysis identified three subscales of short credit card attitude scales while ANOVA showed significant gender and frequency of use differences on all three credit cards attitude components, whereas other demographic, socio-economic and behavioral factors showed significant differences on some of the components of the attitudes toward credit cards. Recommendations presented in this research may foster growth of Macedonian credit card usage and help banks, financial and non-financial institutions in designing their marketing strategies.*

Keywords: *attitudes, credit cards, cognitive, affective, behavioral*

1. Introduction

The topic of credit card attitudes has been subject of lots of research studies so far. Large number of research studies focused on determining the motives for holding credit cards and reasons for credit card use (Lee and Kwon, 2002, Barker and Sekerkaya, 1992, Lee and Hogarth, 1999; Bernthal, Crockett and Rose, 2005). Also, researchers have been interested in understanding credit card usage behaviour and differences in behaviour among different demographic and socio-economic segments (Wickramasinghe and Grugamage, 2009; Kaynak and Harcar, 2001). Additionally, the topics related to attitudes toward debt and money and characteristics of the credit card holders had received interest among the researchers. (Yang, James and Lester, 2005, Hayhoe, Leach and Turner, 1999). Moreover, types of credit card purchase had been analysed by lots of authors. (Kaynak and Harcar, 2001; Lindley, Rudolph and Selby, 1989; Hayhoe, Leach, Turner, Bruin and Lawrence, 2000; Wichramasinghe and Gurugamage, 2009). Although all these findings contribute to better understanding of the topic, however there are contradictions in research findings. Furthermore, there are limited studies that focus on determining the demographic, socio-economic and behavioural differences on different components of attitudes towards credit cards. Thus, the first aim of this paper is to investigate the attitudes toward credit cards in the Republic of Macedonia and explore the reliability of credit card attitude scale developed by Hayhoe, Leach and Turner, 1999. The paper further explores the influence of various demographic, socio-economic and behavioural factors on components of credit card attitudes among which several factors (income, type of the household, usage frequency and period of ownership) are the least explored factors in the literature. In addition, as the attitudes toward credit cards have been widely examined on student population, the present study advances the knowledge on this subject by focusing on the whole population aged above 18. Also, the most of the research studies focus on well-developed countries while the credit card attitudes research studies in South-Eastern European countries and particularly Balkan countries are rare or they have not been conducted at all. Consequently, another aim of this paper is to investigate the attitudes toward credit cards and the influence of demographic, socio-economic and behavioural factors on attitudes toward credit cards in the Macedonian context, thus contributing to a better understanding of attitudes toward credit cards in developing countries. Regarding Macedonia, this study is first attempt to explore attitudes toward credit cards and the impact of demographic, socio-economic and behavioural factors on attitudes toward credit cards.

Accordingly, this study is aimed at answering the following research questions: (1) is the short credit card attitude scale a reliable instrument for measuring attitudes toward credit cards in Macedonian context?; (2) are there differences among people in their attitudes toward credit cards regarding demographic, socio-economic and behavioural characteristics?

1.1. Usage of credit cards in the Republic of Macedonia

In the last several years there has been a big increase of the usage of credit cards among the citizens of the Republic of Macedonia as a result of ongoing reforms in the payment system with European integration as a main goal. According to the National bank of Macedonia, credit cards generally show growth with uneven intensity (in terms of number of credit cards in circulation, number of executed transactions and value of executed transactions) in the period 2005-2011 with some exceptions in 2011 comparing to 2010 (when negative growth rate in number of credit cards in circulation was noted) and in 2009 comparing to 2008 (when negative growth rates in number of credit cards in circulation, number of executed transactions and value of executed transactions were noted). In general, in the period 2005-2011, the number of credit cards in circulation in Macedonia has shown an average annual growth rate of 27.4%, the number of executed transactions with credit cards in Macedonia has shown an average annual growth rate of 30.2% and value of executed transactions with credit cards has shown an average annual growth rate of 23.5%.

The consumers play an important role in usage of credit cards. The attitudes toward credit cards are of critical importance when deciding whether to pay the product with credit card or in cash. In order to discover the reasons for growth in credit card use in the Republic of Macedonia, it is important to understand an individual's attitudes towards credit cards.

2. Literature review and conceptual framing

In this, section, the literature review on credit card attitudes and the influence of demographic, socioeconomic and behavioral factors on credit card attitudes will be presented.

Credit card attitudes. According to Fishbein and Ajzen, 1975 (theory of reasoned action) attitudes and subjective norms influence intentions and the intentions influence behaviour. Ajzen (1991) claimed that a positive attitude toward the object (in this case credit cards) is a major antecedent of an individual's intention to behave (in this case to hold and use credit cards). Additionally, some authors claimed that attitude might not necessary predict behaviour and that the relationship between attitude and behaviour is generally weak (Wäneryd, 1999). According to cognitive dissonance theory (Festinger, 1957) attitudes are based on behaviour. Although diverse, all these findings provide support for including attitudes in the analysis and prediction of behaviour.

Many researchers have analyzed attitude components which influence people to behave in a certain way. Cognitive component of an attitude refers to knowledge and thoughts that consumers have, affective component involve feelings and behavioral component refers to actions. In 1995 Xiao, Noring and Anderson developed 37-item scale for measuring college students' attitudes towards credit cards. They identified 3 components named as cognitive, affective and behavioral. Cognitive attitude component was measured with ten statements, feelings about credit cards (affective) were measured with fifteen statements and twelve statements were related to credit cards usage (behavioral). In 1999 Hayhoe, Leach and Turner developed 12-item attitude scale (short attitude scales). They used four items in each of the three subscales (three attitude component) meaning that the scale composed of four statements dealing with feeling about credit cards (affective), four statements dealing with knowledge (cognitive) and four statements relating to usage of credit cards (behavioral). They revealed that all three subscale scores predicted credit card possession in students in the USA. Later Yang, James and Lester (2005) confirmed the existence of three components of attitudes toward credit cards in their research based on short credit card attitude scale. Based on the discussed literature review, it can be hypothesized that the short credit card attitudes scale is a reliable instrument for measuring credit card attitudes in the Republic of Macedonia (comprised of affective, cognitive and behavioral components).

Several researchers have examined the demographic and socio-economic characteristics of people and their influence on credit card attitudes and use.

Demographic characteristics: Gender is a demographic factor whose influence on credit cards usage and attitudes has been examined in lots of studies. Adcock, Hirschman and Goldstucker (1977) claimed that bank credit card users were more likely to be male. Gender influenced the types of credit card purchase; females use credit cards more for household goods, clothing and personal belongings (Hayhoe et al., 2000; Kaynak and Harcar 2001), while mails for electronics, entertainment, travel and food away from home (Hayhoe et al., 2000; Kaynak and Harcar, 2001). Wichramasinghe and Gurugamage (2009) found significant gender differences only in making payments for medical bills, where females tend to pay medical expenses more than males (p.442). Xiao, Noring and Anderson 1995 revealed that male students had more positive attitude toward credit cards than female students. On the other hand, Kaynak and Harcar (2001) found no significant relationship between genders and attitudes towards credit cards (p.34).

Beside gender, age is another demographic variable that has been frequently used on these types of studies. The literature suggests that the influence of age on credit card attitudes and usage practice are mixed. For example, Adckock et al., 1977 have reported that age has a negative impact on credit card usage. Crook, Hamilton and Thomas (1992) found that younger rather than older credit card holders are more likely to use their credit card, with the most likely users falling into the 30-40 age bracket. The least likely users are those aged 60 or over (p.257). Barker and Sekerkaya (1993) found that the middle-aged group was more likely to hold and use credit cards. On the other hand, Kaynak and Harcar (2001) revealed that there are no statistically significant differences among age groups by their attitudes towards credit cards (p.33). Later, Wickramasinghe and Gurugamage, (2012) found that age doesn't have influence on credit card ownership and use. Warwick and Mansfield (2000) found no significant differences with regard to demographic characteristics (gender and age) and attitudes toward credit cards among students.

Socio-economic characteristics: Income is one of the socio-economic variables that have been found to be significant in credit card usage along with other demographic and behavioral characteristics of the customers (Adcock, Hirschman and Goldstucker 1977, Chien and Devaney, 2001; Kaynak and Harcar 2001; Lee and Kwon 2002). According to Crook, Hamilton and Thomas (1992) the most likely users are those with the highest income and the least likely are those with lower income (less than £2,200). Positive relationship between the amount of credit card debt and household net income was found by Wasberg, Hira and Fanslow (1992). Regarding the household types and characteristics, literature suggests that size of the family influences credit card ownership and use. Kinsey (1981) found that two-person households have more credit cards than single-person households.

Behavioral characteristics have been examined in lot of research studies so far. Lee and Hogarth, (1999), found that most of the convenience users, who use credit cards as an easy mode of payment, almost always paid off their credit card charges (pay their balance in full upon receiving the account statement), while most of the revolvers, who use the card as a mode of financing, said that they hardly ever paid off (they choose to pay interest charges on the unpaid balance) (p.30). Wickramasinghe and Gurugamage (2009) found that most of the people tend to make a *payment* that is greater than, or equal to, minimum payment due, while the percentage of people who tend to pay their balance in full upon receiving the account statement is low. Kaynak and Harcar (2001) claimed that attitudes are increasingly positive towards credit cards as the *length of time of ownership* increases (p.35). They found that the longer the period of ownership, the more positive attitudes of credit cards owners toward usage. According to Crook, Hamilton and Thomas (1992) people who are least likely to use their card are those who have held a bank account for less than six months and for 19 years and over. In contrast, the most likely card users are those who have held a bank account for four or five years. Xiao, Noring and Anderson 1995 revealed students who *had more credit cards* and students who used them more *frequently* had more positive attitudes toward credit cards comparing with those who had no credit card and those who used them less frequently. Wickramasinghe and Gurugamage (2011), claimed that users who owned credit cards for less than 5 years perceive that credit cards lead to more spending (p.85). According to Ahmed, Amanullah and Hamid (2009) with the increase of age, consumers discard multiple cards and just hold one or two cards (p.54). In the research conducted on the sample of students, Hayhoe, Leach and Turner 1999 found that students who reported not having credit cards scored lower on affective credit card attitude as compared with students with credit cards. Students with four or more credit cards thought more about consequences of using credit (cognitive credit attitude).

On the basis of the previous studies that concentrated on the influence of the demographic, socio-economic and behavioral characteristics of individuals on credit card use (gender, age, income, type of household, number of credit cards owned, payment of credit bills, period of ownership and frequency of usage) and subscales of the short credit card attitude scale, ANOVA test was employed.

3. Research methodology

The research presented in this paper relies on the short attitude scale developed by Hayhoe, Leach and Turner (1999). The survey instrument used consisted of two parts. The first part gathered demographic, socio-economic and behavioral characteristics (8 statements) and the second part included 12 five-point Likert statements related to credit cards attitudes ranging from "strongly disagree" to "strongly agree". The eight demographic, socio-economic and behavioral variables were: gender and age (demographic), average household income and type of the household (socio-economic), and number of credit cards owned, payment of monthly credit card bills, frequency of credit card use and period of ownership (behavioral). The twelve statements related to credit cards attitudes reflect the cognitive, affective and behavioral attitudes toward credit cards. The cognitive attitudes involve thoughts (e.g. Heavy use of credit cards results in heavy debt); affective attitudes involve emotional feelings (e.g. My credit card makes me feel happy); while behavioral attitudes

involve actions (e.g. I would like to apply for more credit cards). In total, the questionnaire used in the paper consisted of 20 statements.

The sample for this study comprises 143 respondents aged from 18 to 68. In the Republic of Macedonia people can have credit card if they are aged above 18 and have regular monthly salary or current account with the bank. Banks and other non-financial institutions (since October 2011 in Macedonia besides financial institutions it is allowed non-financial institutions to issue credit cards as well) don't issue credit cards to retired people aged above 68. Respondents were selected at random, informed about the purpose of the research and asked if they had credit cards and were willing to complete the questionnaire. If they didn't have credit cards and were not willing to participate in the survey, the next convenient respondent was selected. Among 150 respondents randomly selected, only 143 usable responses were received, for an overall response rate of 95.3%. Gender was the only control variable. Among the 142 people who gave exploitable responses, 50.7% were men and 49.3% were women reflecting the gender structure of the population in the Republic of Macedonia (according to the State Statistical Office of the Republic of Macedonia 49,9% of the citizens are females and 50,1% are males). The sample size is above the recommended minimum level of at least five times as many observations as the number of variables to be analyzed. (Hair, Black, Babin, Anderson and Tathan, 2006). The profile of the sample is presented in table 2.

Table 2. **Sample characteristics**

	No.	*%*
gender		
male	72	50.7
female	70	49.3
age		
young	55	43.7
middle-aged	47	38.7
old	40	17.6
income		
low	37	23.2
average	40	42.3
high	45	34.5
type of the household		
married couple with or without child(ren)	42	29.6
single parent with child(ren)	34	23.9
non married couple with or without child(ren)	36	25.4
non family household (one person household/ multi persons household)	30	21.1
number of credit cards owned		
one	61	57.7
several	54	31.7
lot	25	10.6
payment of credit bills		
minimum payment	58	40.8
between the minimum and full amount	33	23.2
credit bills in full	51	35.9
frequency of use		
very rare	45	31.7
once in a couple of days	44	31.0
every day	53	37.3
period of ownership		
recently	35	24.6
couple of months	47	33.1
one year and more	60	42.3

Data analysis was conducted in two stages. First, a factor analysis and Cronbach alpha were used to reveal the components of attitudes toward credit cards and reliability of credit card attitudes scale. In the second stage, ANOVA was employed to reveal the demographic, socio-economic and behavioral differences in credit card attitudes.

4. Results

Construct reliability was assessed using factor analysis with oblimin (oblique) rotation. There were three factors, with 74.4% of explained variance.

Table 3. **Factor analysis results, factor loadings** (Principal axis factoring, Oblimin (oblique) rotation) (N=142)

items	Factor		
	1	2	3
behavioral items			
Even though I know it is not easy to acquire credit cards, I always try to apply for one more	**0,979**	-0,073	-0,007
I would like to try all kinds of credit cards	**0,954**	0,074	0,024
I want to possess more credit cards than I have now	**0,943**	0,028	-0,030
I would like to apply for more credit cards	**0,888**	-0,007	0,091
affective items			
My credit card makes me feel happy	-0,006	**0,939**	-0,012
I love to have a credit card	0,032	**0,800**	-0,007
I like using credit cards	-0,120	**0,746**	0,045
The very thought of using credit cards disgusts me	0,150	**0,453**	-0,060
cognitive items			
I think it is unwise to use any credit card	0,075	-0,011	**0,884**
Heavy use of credit cards results in heavy debt	0,044	0,021	**0,884**
Because I use a credit card, my debt rises every day	-0,003	-0,002	**0,838**
The cost of using credit cards is too high	-0,058	-0,010	**0,825**
% of variance	36,25	26,83	11,29

Reliability of scales was assessed using Cronbach alpha coefficients. Cronbach's coefficient alpha for the overall scale was 0.816 whereas subscale reliability measures for dimensions 1, 2 and 3 were 0.83, 0.92 and 0.97, respectively. All reliability measures are above the recommended minimum level of 0.60 (Hair et al., 2006). Cronbach alpha coefficients of the behavioural, affective and cognitive subscales and overall reliability coefficient indicate high internal reliability of the data collected.

As shown in Table 3, three factors were extracted and they are interpreted as: behavioral (4 items), cognitive (4 items) and affective (4 items). Factor 1 (behavioral) accounts for 36.3% of the total explained variance and consists of 4 variables which relate to actions resulted from owning and using credit cards. Factor 2 (affective) accounts for 26.8% of the total explained variance and refers to feelings. Factor 3 (cognitive) accounts for 11.3% of the total explained variance and consists of 4 variables which relates to the thoughts about having and using credit cards for payment. It can be noticed that item 3 in the affective subscale had the lowest loading of all items on its appropriate factor which can be explained with the fact that this item is reversed scored. The alternative for item 3 according to Yang, James and Lester, (2005) could be "the very thought of using credit cards excites me".

From the table 3 it can be seen that the factor analysis confirmed the assignment of items from the credit cards attitude scale to the three subscales. These conclusions are in line with the conclusions regarding the subscales identified by Hayhoe, Leach and Turner (1999) and Yang, James and Lester (2005).

4.1. Demographic, socio-economic and behavioral differences

The differences (demographic, socio-economic and behavioral) on the three identified factors were evaluated by ANOVA technique, where a $p<0.05$ was considered significant.

Table 5. Gender, age and income differences

		gender		p value/ F value	age			p value/ F value	income			p value/ F value
	sample average	male	female		young	middle-aged	old		low	average	high	
f1	2,92	3,79	2,02	**0,000**	2,66	3,23	2,91	0,073	2,99	3,17	2,73	0,215
				112,336				2,667				1,553
f2	3,37	3,58	3,16	**0,017**	3,46	3,18	3,47	0,228	3,36	2,97	3,62	**0,004**
				5,884				1,493				**5,885**
f3	3,61	4,02	3,18	**0,000**	3,35	3,89	3,62	**0,035**	3,61	3,72	3,53	0,634
				25,597				**3,422**				0,456

As compared to female credit card users, males have more "favorable" cognitive, affective and behavioral attitudes toward credit cards. Young people have less "favorable" behavioral attitudes toward credit cards, while middle-aged people have more "favorable" cognitive and behavioral attitudes toward credit cards. Regarding the income, people with average income show less than average affective score and more favorable cognitive score.

Table 6. Payment practice, type of household differences

	payment			p value/ F value	type of household				p value/ F value
	minimum	between min. and full amount	full amount		married couple with or without child(ren)	single parent with child(ren)	non married couple with or without child(ren)	non family household	
f1	2,09	2,87	3,90	**0,000**	2,85	3,26	2,80	2,78	0,364
				39,383					1,069
f2	3,35	3,22	3,50	0,399	2,70	3,93	3,53	3,51	**0,000**
				0,924					**11,120**
f3	3,08	3,98	3,96	**0,000**	3,62	3,68	3,83	3,23	0,193
				13,877					1,598

Regarding the payment practice it can be noted that people who pay credit bills in full have more "favorable" behavioral, affective and cognitive attitudes toward credit cards comparing to people who pay minimum amount of credit bills and those who pay between minimum and full amount. Married couples have less "favorable" affective attitudes toward credit cards while single parents with child(ren) have more "favorable" attitudes in general toward credit cards.

Table 7. Number of credit cards, frequency of use and period of ownership differences

	number of credit cards			P value/ F value	frequency of use			p value/ F value	period of ownership			p value/ F value
	one	several	many		very rare	once in a couple of days	every day		recently	couple of months	one year or longer	
f1	2,90	2,84	3,15	0,689	2,09	2,87	3,90	**0,000**	2,22	2,41	3,76	**0,000**
				0,373				**94,065**				**28,921**
f2	3,08	3,60	3,59	**0,022**	3,35	3,22	3,50	**0,034**	3,14	3,51	3,42	0,192
				3,920				**3,464**				1,670
f3	3,58	3,61	3,66	0,960	3,08	3,98	3,96	**0,030**	3,49	3,19	4,00	**0,000**
				0,041				**3,581**				**9,006**

People who have many credit cards have more "favorable" behavioral, cognitive and affective attitudes toward credit cards comparing to people who hold one or several credit card, just like the people who use credit cards every day. With the increase of period of ownership, "favorability" of behavioral attitudes toward credit cards increases. Those who use credit cards for a year or longer, have more "favorable" behavioral, affective and cognitive attitudes toward credit cards.

The ANOVA test showed that there are significant differences between males and females ($p<0.05$) on all 3 factors (behavioral, affective and cognitive). The same conclusion can be made for frequency of credit card use as there are significant differences among people who use credit card rarely, people who use it once in a couple of days and people who use it every day on all three attitude components. There are significant differences among people who make minimum payment, people who pay between the minimum and full amount and those who pay the credit bills in full on behavioral and cognitive attitudes toward credit cards. Also, there are significant differences among the people who have got credit card recently, who possessed it couple of months ago and those who had credit card long time ago on both behavioral and cognitive attitude components. Significant differences can be noticed among different income groups, among people with different number of credit cards owned and among people who belong to different household type on affective component of attitudes. According to the ANOVA test results (Table 6), it was proved that there are significant differences among young, middle aged and old people only on cognitive component of attitudes toward credit cards.

5. Conclusions and discussions

The factor analysis reveled that short credit card attitude scale was highly reliable instrument for measuring attitudes toward credit cards in the Republic of Macedonia. The results of the analysis showed three subscales of short credit card attitude scales named as behavioral, affective and cognitive subscales. The three subscales had high Cronbach alpha coefficients indicating the satisfactory reliability. The high value of Cronbach alpha coefficient for the overall scale indicated satisfactory item-total reliability. The findings from this study indicate that one demographic characteristic (gender) and one behavioral characteristic (frequency of credit cards use) showed differences in all three components of the attitude toward credit cards. Two behavioral characteristics (payment of credit card bills and period of ownership) displayed the differences in terms of behavioral and cognitive components of attitudes toward credit cards. Income, type of household and number of credit cards owned showed differences only in terms of affective component of the attitudes while age only in terms of cognitive component of the attitudes.

Institutions who are involved in issuing credit cards should take advantage of the fact that people with certain demographic, socio-economic and behavioral characteristics have different attitudes toward credit cards. For example, since age groups differ in terms of their attitudes toward credit cards, banks should develop special communications programs to target people from particular age group having in mind their attitudes toward credit cards and thus achieving the marketing and communications objectives. If the company wants to create more positive cognitive attitudes toward credit cards, it can use rational appeals in its marketing communications activities directed primarily towards young females who pay minimum amount of the credit bills, who use the credit card very rare and possess it couple of months ago. If the company wants to create more positive affective attitudes toward credit cards, it can use emotional appeals in its communications directed toward females and married couples with average income who use credit cards once in a couple of day. Also if the bank wants to create positive behavioral attitudes toward credit cards, it can rely on sales

promotional activities mostly directed toward young people who pay minimum amount of the credit bills, who use credit cards vary rare and who got it couple of months ago. Also segmentation analysis should be made in order to see the characteristics of the people with favorable and unfavorable attitudes toward credit cards and later on to design special marketing programs aimed to different segments. Further analysis could be made in finding correlation between credit card attitudes and money attitudes, as well as in revealing the influence of additional demographic, socio-economic and behavioral characteristics of credit card users on credit cards attitudes.

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