

Consumer credit card ownership and usage practices: empirical evidence from Sri Lanka

Vathsala Wickramasinghe¹ and Anurudh Gurugamage²

¹Department of Management of Technology, Faculty of Engineering, University of Moratuwa, Moratuwa, Sri Lanka

²Sri Lanka Air Force, Air Force Headquarters, Colombo, Sri Lanka

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Correspondence

Vathsala Wickramasinghe, Department of Management of Technology, Faculty of Engineering, University of Moratuwa, Moratuwa, Sri Lanka.

E-mail: vathsala@mot.mrt.ac.lk

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Abstract

Knowledge that has been accumulated through research efforts concerning credit card ownership and usage behaviour has been confined to Western societies. Given the importance of cross-national application of consumer marketing concepts and propositions for academic and practical reasons, investigations are needed to test whether consumer credit card usage patterns that are assumed to exist in the West also exist in non-Western parts of the world, especially in Asia. Therefore, objectives of this research were to explore credit card ownership and usage practices in Sri Lanka, and to explore the relationship between credit card ownership and usage practices, and demographic and socio-economic characteristics of credit card users. The findings offer implications for researchers and practitioners.

Introduction

Credit cards have become a vital component of personal money management and consumer lifestyle management (Garcia, 1980; Feinberg, 1986; Holt, 1997; Durkin, 2000; Hayhoe *et al.*, 2000; Kaynak and Harcar, 2001; Bernthal *et al.*, 2005). Credit card ownership and use have increased substantially over the past decades, and credit card service has become one of the most lucrative financial services (Kaynak and Harcar, 2001; Goyal, 2006). Literature provides evidence of the availability of credit cards to working and middle-class families as credit card lenders have extended credit to riskier customers (Littwin, 2008). Despite the substantial risks to lenders that they will be unable to pay their bills on time, working and middle-class families often pay high rates of interest as they are among the industry's most profitable customers. The high interest rates and penalties can quickly multiply the original debt, so that a modest number of purchases can leave consumers deeply mired in debt (Littwin, 2008). However, this broadened access to credit cards facilitates those who are in the working and middle classes to achieve a level of participation in contemporary consumer culture that is qualitatively different from what would be possible in its absence. In this context, the entire range of practices consumers use to manage their lifestyles with credit cards should be of particular interest to consumer researchers.

Although as a basic marketing rule credit card lenders should be knowledgeable of attitudes of their customers towards credit cards and how they come to use or abuse credit cards (Feinberg, 1986;

Kaynak and Harcar, 2001), the knowledge that has been accumulated through research efforts concerning credit card ownership and usage behaviour was confined to Western societies (e.g. Slocum and Matthews, 1970; Plummer, 1971; Awh and Waters, 1974; Burman, 1974; Wasberg *et al.*, 1992; Bernthal *et al.*, 2005). Given the importance of cross-national application of consumer marketing concepts and propositions for academic and practical reasons, investigations are needed to test whether consumer attitudes towards credit cards that are assumed to exist in the West also exist in non-Western parts of the world, especially in Asia. Although a few empirical research studies have been conducted on this topic in the developing countries (Barker and Sekerkaya, 1992; Kaynak and Harcar, 2001; Goyal, 2006), a full array of consumer attitudes towards possession, utilization, the repayment of credit card debt and lifestyle outcomes, and the influence of demographic and socio-economic characteristics of credit card users on these aspects remained virtually unexplored. Therefore, this research undertaken in Sri Lanka is unique in its approach because no previous research has attempted to analyse the areas addressed in this study in the context of an Asian developing country, where credit card business is a lucrative banking service today. In the above context, the specific objectives of the research were: (a) to explore credit card ownership and usage practices in Sri Lanka, and (b) to explore the relationship between credit card ownership and usage practices, and demographic and socio-economic characteristics of credit card users.

In order to provide the context for the article, in the next section, relevant literature is briefly reviewed. This is followed by the

methodology adopted. Subsequently, the main findings are presented and discussed. The article concludes with a discussion on the implications of the findings and research areas for further inquiry and understanding.

Theoretical background and hypotheses

According to consumer behaviour literature, consumer usage behaviour and benefits sought from a product or a service are one of the best predictors to explain consumer purchase behaviour (Lee and Kwon, 2002). Consumers use credit cards, which are issued by financial institutions, as a payment device and a source of revolving credit (Garcia, 1980; Hirschman, 1981; Ausubel, 1991; Lee and Hogarth, 1999; Starvins, 2000; Bernthal *et al.*, 2005). Based on the main use of credit cards and benefits sought, extant literature segments credit card users into two groups: convenience users and revolvers (Lee and Hogarth, 1999). Convenience users, on the one hand, tend to use credit cards as an easy mode of payment and to typically pay their balance in full upon receiving the account statement. Revolvers, on the other hand, use the card principally as a mode of financing and elect to pay interest charges on the unpaid balance (Lee and Kwon, 2002). When consumers use credit cards as a mode of financing, credit cards compete with bank loans and other forms of financing (Brito and Hartley, 1995). As a result, credit cards account for a substantial and growing share of consumers' debt through incremental borrowing (Canner and Luckett, 1992; Wasberg *et al.*, 1992; Bernthal *et al.*, 2005; Littwin, 2008).

In the above context, credit cards have raised concerns in two areas, namely, whether consumers fully understand the costs and implications of using credit cards, and whether credit cards have encouraged widespread over-indebtedness, particularly among those least able to pay. These two issues are identified as related because the lack of understanding may result in over-indebtedness (Durkin, 2000). Hence, an individual's level of intellectual understanding and comprehension of credit cards and their use, knowledge of and ability to compare information on credit card costs, and literacy on personal finance have become very important (Feinberg, 1986; Mitchell, 1989; d'Astous and Miquelon, 1991; Berlin and Mester, 2004; Kim *et al.*, 2005), especially, in a time period where credit cards have been aggressively marketed and sold, and where credit card issuers have penetrated different demographic and socio-economic markets by relaxing eligibility standard and requirements.

Extant literature identifies credit card practices as the reasons for owning credit cards, number of credit cards owned, types of credit card purchases, place of purchase, frequency of usage, payment practices and all other factors associated with owning and using credit cards (Hirschman, 1979; Feinberg, 1986; Danes and Hira, 1990). Several studies have reported that the demographic and socio-economic background of individuals has a strong influence on their credit card practices (Beardon *et al.*, 1978; Hirschman, 1979; Garcia, 1980; Kaynak and Harcar, 2001). Some of the demographic and socio-economic characteristics that have been found to be significant in describing consumer credit card practices are sex, education, income, age, ethnic background and credit card type (Slocum and Matthews, 1970; Bowers and Crosby, 1980; Chien and Devaney, 2001; Kaynak and Harcar, 2001; Lee and Kwon, 2002).

Sex is identified as a significant predictor of credit card ownership and use. Some early studies found that credit card users were more likely to be males (Adcock *et al.*, 1977); single males were more likely to use credit cards than females (White, 1975). Evidence also reveals that the impact of sex on types of credit card purchase is significant, where females use credit cards more for household goods, clothing and personal belongings (Lindley *et al.*, 1989; Hayhoe *et al.*, 2000; Kaynak and Harcar, 2001), while males use their cards more for electronics, entertainment, travel and food away from home (Kaynak *et al.*, 1995; Hayhoe *et al.*, 2000; Kaynak and Harcar, 2001).

Extant literature provides evidence for the relationship between the level of education and credit card ownership (Awh and Waters, 1974; Adcock *et al.*, 1977; Canner and Cynrak, 1985; Kaynak and Harcar, 2001), and the frequency of credit card usage (Danes and Hira, 1990; Barker and Sekerkaya, 1992), where respondents with a high level of education and knowledge of consumer credit tended to own and use credit cards more often.

Income is another demographic variable that shows a strong positive relationship with credit card ownership and use, where high-income groups were found to spend more on different product categories than any other group (Barker and Sekerkaya, 1992; Kaynak *et al.*, 1995; Kaynak and Harcar, 2001). Further, economically less privileged persons use credit cards as a means of instalment credit as they are not able to borrow money from banks at a reasonable rate (Garcia, 1980; Kaynak and Harcar, 2001; Bernthal *et al.*, 2005).

Age is also identified as a significant predictor of credit card ownership and use. Barker and Sekerkaya (1992) and Kaynak and Harcar (2001) suggested that the middle-aged group was more likely to hold and use credit cards. Several researchers in the past have reported a negative impact of age on credit card usage (Awh and Waters, 1974; Adcock *et al.*, 1977; Wasberg *et al.*, 1992).

Marital status and the number of members in the family are two other demographic characteristics found to influence credit card ownership and use (Delener and Katzenstein, 1994). Married respondents were found to have more credit cards than singles and separated/divorced Asian and Hispanic consumers (Delener and Katzenstein, 1994).

In this Sri Lankan study, eight demographic and socio-economic characteristics of credit card users were investigated, namely, age, sex, marital status, the level of education, the number of dependents in the family, monthly income, the length of credit card ownership and credit card debt ceiling. Based on the empirical and anecdotal evidence indicating the relationship between demographic and socio-economic characteristics of individuals, and credit card ownership and use, for this Sri Lankan study, it is proposed that:

H1: Criteria used to evaluate alternative sources of credit cards vary by demographic and socio-economic characteristics of its users.

H2: Types of purchase made with credit cards vary by demographic and socio-economic characteristics of its users.

H3: Demographic and socio-economic characteristics of credit card users will have a significant impact on consumer awareness of credit cards.

H4: Demographic and socio-economic characteristics of credit card users will have a significant impact on reasons for obtaining credit cards.

H5: Demographic and socio-economic characteristics of credit card users will have a significant impact on their attitudes towards lifestyle outcomes of credit card usage.

H6: Demographic and socio-economic characteristics of credit card users will have a significant impact on their attitudes towards governmental intervention to help consumers make informed choices on competitive credit card offerings.

Measures

The research measures for this study were developed based on the insight gained from the previously reviewed literature that was grounded mainly in the West, and based on the insight gained during the preliminary investigations by the two authors in Sri Lanka. Details of the measures used in the study are as follows.

- Consumer awareness of credit cards – 13 items on a five-point Likert scale ranging from (1) ‘strongly disagree’ to (5) ‘strongly agree’. Items are shown in Table 2.
- Reasons for obtaining credit cards – 14 items on a five-point Likert scale ranging from (1) ‘strongly disagree’ to (5) ‘strongly agree’. Items are shown in Table 3.
- Consumer attitudes towards lifestyle outcomes of credit card usage – 13 items on a five-point Likert scale ranging from (1) ‘strongly disagree’ to (5) ‘strongly agree’. Items are shown in Table 4.
- Criteria used to evaluate alternative sources of credit cards – five criteria were inquired on a five-point Likert scale ranging from (1) ‘very low’ to (5) ‘very high’. The five criteria are shown in Table 6.
- Types of purchase made with credit cards – seven types of purchase were inquired on a five-point Likert scale ranging from (1) ‘always’ to (5) ‘never’. The seven types of purchase are shown in Tables 7 and 8.
- The way credit card users generally handle monthly payments on credit cards – five options were provided to circle the most frequently used option. Options are shown in Table 9.
- Consumer attitudes towards governmental intervention to help consumers make informed choices on competitive credit card offerings – one item on a five-point Likert scale ranging from (1) ‘strongly disagree’ to (5) ‘strongly agree’.

In addition, questions were asked to collect data on age, sex, marital status, the highest level of education, the number of dependents in the family, monthly income, the length of credit card ownership, debt ceiling and credit card type. The data provided by respondents were shown in Table 1. These data were thereafter recoded into two levels as shown in Table 9.

The questionnaire was originally developed in English and then it was translated into the native language, *Sinhala*, and finally translated back from *Sinhala* to English. The translated questionnaire was piloted with a random sample of 10 customers that fit with the intended sample of the study prior to the distribution. It should be noted that this research is conducted as an independent study for academic purposes. Therefore, the questions in the questionnaire were designed by the authors, and these did not address specific organizational interests. Further, participants were briefed on the aims of the study prior to data collection, and their responses were anonymous. Data were analysed using the SPSS programme (SPSS Inc., Chicago, IL, USA). In addition to descriptive statistics, independent samples *t*-test, factor analysis, correlation and regression were used.

Sample

There is no evidence of studies carried out in Sri Lanka on consumer attitudes towards credit cards. No secondary data sources, such as consumer finances, were found to be used in this study. Therefore, the present research study is descriptive in nature conducted purely for academic purposes based on the survey research methodology. The sample of the study is restricted to individuals who possess a credit card issued by a financial institution that allows the cardholder to utilize the card for payments and as a source of revolving credit. There are three types of credit cards in circulation in Sri Lanka, namely, Visa, MasterCard and American Express. The anecdotal information gathered on credit card possession led to suggest that Visa accounts for about 80% of the credit card market, followed by MasterCard (12%) and American Express (8%). Commercial banks operating in the country, primarily, issue these credit cards. A structured questionnaire is used as the research instrument. Questionnaire was administered through face-to-face personal interviews conducted among a convenience sample of 177 credit card holders employed or self-employed in Colombo metropolitan area, which is considered as the main commerce and financial hub of the country, during September and November 2007. All the interviews were conducted by the second author of this study, and the survey took approximately 15 min to complete. The demographic and socio-economic characteristics of the respondents are shown in Table 1. Further, income and expenditure data of Sri Lanka are given in Appendix 1.

Results

Measure evaluation

In order to establish the dimensionality of the scales, 13 items on consumer awareness of credit cards, 14 items on reasons for obtaining credit cards and 13 items on consumer attitudes towards lifestyle outcomes of credit card usage were subjected to exploratory factor analysis with direct oblimin rotation, separately. For this, principal components analysis was conducted for the three sets of item scales, separately (suppressed absolute values were less than 0.45).

The factor analysis for consumer awareness of credit cards yielded four factors with eigenvalues >1 , which together accounted for 56.55% of the variance. Kaiser–Meyer–Olkin (KMO) statistic was 0.746 and Bartlett’s test of sphericity is significant at 0.000. The results are shown in Table 2 along with factor loadings, factor variance percentages and Cronbach’s alpha of the factor. Person correlation for inter-items and total-items was conducted to identify the relationship across four derived factors. The inter-item correlations were not included in this article because of their excessive length. The total-item correlation results are shown in Table 5, along with other variables investigated in this study. All the 13 items of this scale loaded onto one of the four derived factors, which were consequently labelled as subscales. Factor 1 was labelled as ‘personal financial literacy’, factor 2 as ‘complementary/competitive credit card systems’, factor 3 as ‘credit risk’ and factor 4 as ‘alternative forms of credit’.

The factor analysis for reasons for obtaining credit cards yielded four factors with eigenvalues >1 , which together accounted for 57.08% of the variance. KMO statistic was 0.779 and Bartlett’s

Table 1 Demographic and socio-economic characteristics of the respondents ($n = 177$)

	%		%
The length of ownership		Age (years)	
Less than 5 years	46	16–25	12
5–10 years	37	26–35	44
More than 10 years	17	36–45	34
Card type		46 or above	10
Visa	62	Sex	
MasterCard	34	Male	77
American Express	4	Female	23
Debt ceiling (Sri Lankan rupees)		Marital status	
Up to 25 000	29	Single	24
Up to 50 000	44	Married	76
Up to 100 000	19	Highest level of education	
Above 100 000	8	G.C.E. (O/L)	15
Number of dependents		G.C.E. (A/L)	68
None	14	Graduate/postgraduate	17
1	13	Monthly income (Sri Lankan rupees) ^a	
2	24	Less than 15 000	6
3	36	Less than 25 000	20
4	13	Less than 35 000	30
		Less than 45 000	29
		Less than 55 000	9
		Above 55 000	6

^a1 US\$ = 108 Sri Lankan rupees (as of 30 September 2008).

G.C.E. (O/L), General Certificate in Education (Ordinary Level); G.C.E. (A/L), General Certificate in Education (Advanced Level).

Table 2 Consumer awareness of credit cards

	F1: Personal financial literacy	F2: Complementary/ competitive credit card systems	F3: Credit risk	F4: Alternative forms of credit
I am currently managing my credit card debt well	0.749			
Even though I have incurred a credit card debt, I am spending money responsibly	0.700			
When I decide to incur more credit card debt, I consider my monthly income	0.685			
I am successful in living within my budget	0.714			
I know ways to reduce my credit card debt	0.717			
I am personally responsible for my credit card debt	0.607			
I am aware of the different credit card systems on offer		0.635		
I am aware of fees, interest rates and methods of calculating interest charges by different card issuers		0.758		
I am aware of the costs associated with different credit card issuers		0.826		
I am aware of the implications of incremental borrowing through credit card without repaying the debt			0.579	
I am aware of the implications of getting credit card debt ceiling increased			0.578	
I am aware of the implications of borrowing loans/obtaining another credit card to pay my existing credit card debt			0.575	
I am aware of the alternative payment and financing methods				0.757
Percentage of variance	24.095	16.626	8.165	7.671
Cronbach's alpha based on standardized items	0.836	0.752	0.701	–

test of sphericity is significant at 0.000. The results are shown in Table 3. All the 14 items of this scale loaded onto one of the four derived factors. Factor 1 was labelled as 'transaction convenience', factor 2 as 'lifestyle facilitator', factor 3 as 'marketing

and communication programmes' and factor 4 as 'short-term financial support'.

The factor analysis for consumer attitudes towards lifestyle outcomes of credit card usage yielded five factors with eigenvalues

Table 3 Reasons for obtaining credit cards

	F1: Transaction convenience	F2: Lifestyle facilitator	F3: Marketing and communication programmes	F4: Short-term financial support
Safety and security	0.763			
Convenience	0.756			
Ease of record keeping as bank regularly delivers bill statements at periodic intervals	0.599			
Can be used to cover emergency needs	0.675			
My family members' use of credit cards		0.508		
To obtain incentives offered on credit cards such as life insurance, bonus tour packages, etc.		0.556		
To keep up with colleagues and friends		0.696		
The policies of the place of purchase regarding acceptable payment systems		0.538		
To purchase items through the Internet		0.712		
Prestige		0.592		
I was influenced by credit card promotions			0.736	
Advertisements on newspaper and television encouraged me to obtain a credit card			0.488	
To delay cash outlay				0.880
To help me make ends meet because I often run out of money				0.743
Percentage of variance	25.722	14.572	8.745	8.047
Cronbach's alpha based on standardized items	0.794	0.720	0.695	0.879

Table 4 Consumer attitudes towards lifestyle outcomes of credit card usage

	F1: Indebtedness	F2: Access to mainstream society	F3: Enhanced spending	F4: Facilitated commerce	F5: Financial confidence
Because of credit card debt I have restricted my social activities	0.814				
Credit card debt has a negative impact on the harmony of my domestic life	0.671				
Credit card has encouraged me to spend beyond my income	0.611				
Credit card has placed me in financial difficulties	0.693				
The places where I shop have changed and I now purchase things from better places		0.814			
Credit card has enabled me to travel more and meet more people		0.679			
Credit card has added a quality to my life		0.789			
Credit card tempts me to buy things that I do not need			0.513		
Credit card has influenced me to spend without carrying monthly balance			0.734		
Credit card has encouraged me to spend more and buy more			0.729		
Credit card has not influenced my lifestyle to any significant level				0.703	
My attitude towards credit cards has changed				0.803	
Credit card has boosted my self-confidence by enabling me to spend for my needs at any time and anywhere					0.857
Percentage of variance	22.781	14.147	10.525	8.950	8.359
Cronbach's alpha based on standardized items	0.824	0.853	0.786	0.861	–

>1, which together accounted for 64.76% of the variance. KMO statistic was 0.659 and Bartlett's test of sphericity is significant at 0.000. The results are shown in Table 4. All the 13 items of this scale loaded onto one of the five derived factors. Factor 1 was labelled as 'indebtedness', factor 2 as 'access to mainstream society', factor 3 as 'enhanced spending', factor 4 as 'facilitated commerce' and factor 5 as 'financial confidence' (refer to Table 5).

The influence of demographic and socio-economic characteristics on credit card ownership and use

The results of the *t*-test for the criteria used by respondents to evaluate alternative sources of credit cards are shown in Table 6. The influence of age is significant in evaluating credit cards that

Table 5 Correlations

	Awareness								Reasons								Lifestyle outcomes							
	1.	2.	3.	4.	5.	6.	7.	8.	9. F1	10. F2	11. F3	12. F4	13. F1	14. F2	15. F3	16. F4	17. F1	18. F2	19. F3	20. F4	21. F5			
1. Age																								
2. Sex	-0.029																							
3. Marital status	0.317*	-0.126**	1																					
4. Education	0.099	0.083	0.037	1																				
5. Dependents	0.276*	-0.266*	0.313*	-0.003	1																			
6. Income	0.392*	-0.104	0.338*	0.197***	0.173**	1																		
7. Length owned	0.208***	0.000	0.240***	0.105	0.110	0.221***	1																	
8. Debt ceiling	0.214***	0.185***	0.162**	0.356*	0.081	0.401*	0.225***	1																
Awareness																								
9. F1	0.155**	0.005	0.092	0.102	-0.044	0.128	0.116	0.327*	1															
10. F2	0.074	-0.057	0.230***	-0.115	0.141**	0.161**	0.103	0.106	0.021	1														
11. F3	0.062	-0.151**	0.042	-0.077	0.072	0.251***	0.061	-0.039	0.083	0.035	1													
12. F4	-0.076	0.068	-0.066	0.167**	-0.130**	-0.075	-0.006	-0.019	0.112	0.076	0.102	1												
Reasons																								
13. F1	0.125	0.206***	0.126	0.153**	0.018	0.028	-0.091	0.323*	0.546*	0.099	-0.219***	0.119	1											
14. F2	0.029	-0.070	-0.004	-0.005	-0.025	0.021	-0.068	-0.098	-0.045	0.021	0.126	-0.052	0.024	1										
15. F3	-0.094	-0.105	0.056	-0.129**	-0.027	-0.147**	-0.195***	-0.245***	-0.221***	0.119	0.117	-0.208***	0.051	0.098	1									
16. F4	-0.073	-0.175**	-0.033	-0.051	0.026	0.079	0.245***	0.059	0.298*	-0.027	0.221***	-0.075	0.123	0.039	0.106	1								
Lifestyle outcomes																								
17. F1	-0.094	-0.082	-0.130*	-0.080	0.076	-0.188***	-0.182***	-0.263*	-0.517*	0.060	0.094	-0.081	-0.224***	0.071	0.447*	-0.057	1							
18. F2	-0.020	-0.354*	-0.034	-0.133**	0.091	0.195***	0.000	-0.175**	-0.034	0.020	0.365*	-0.173**	-0.218***	0.340*	0.268*	0.306*	0.058	1						
19. F3	0.042	0.134**	-0.017	0.019	-0.118	0.075	-0.132**	0.096	0.070	-0.109	0.077	-0.022	0.280*	0.060	0.100	0.056	0.113	0.135	1					
20. F4	0.030	0.074	0.160**	0.095	0.071	0.085	0.087	0.112	0.099	0.190***	0.164**	0.038	-0.038	-0.109	0.095	-0.002	0.206	0.072	0.076	1				
21. F5	-0.005	0.253*	-0.004	0.131*	-0.121	-0.004	0.041	0.038	0.056	-0.088	-0.087	0.091	0.221***	0.059	0.086	0.043	0.038	0.198	0.151	0.151	1			
22. Government regulation	-0.033	0.146**	0.111	0.082	-0.003	-0.041	0.047	0.262*	0.143**	0.148**	-0.156**	0.039	0.265*	-0.112	0.130**	0.012	-0.128**	-0.142**	0.136**	0.354*	0.116	1		

*P < 0.001(1-tailed); **P < 0.05; ***P < 0.01.

Table 6 Criteria used to evaluate alternative sources of credit cards

	Age		Sex		Marital status		Education		Monthly income		Dependents		
	Total mean (n = 177)	35 years or less (n = 99)	More than 35 years (n = 78)	Male (n = 136)	Female (n = 41)	Single (n = 43)	Married (n = 134)	Low (n = 148)	High (n = 29)	Sig (two-tailed) (n = 100)	Rs 35 000 or less (n = 77)	More than Rs 35 000 (n = 91)	Sig (two-tailed) (n = 86)
Brand name	4.12	4.02	4.22	4.06	4.31	4.16	4.09	4.07	4.33	0.176 ^a	4.04	4.18	0.283
Interest rate	4.44	4.46	4.39	4.44	4.40	4.50	4.41	4.50	3.92	0.006*	4.42	4.42	0.884
International use	4.28	3.85	4.52	4.27	4.30	4.10	4.34	4.29	4.25	0.874	4.21	4.35	0.605
Debt ceiling	3.81	3.86	3.73	3.69	4.22	3.80	3.81	3.74	4.13	0.032***	3.88	3.71	0.189
Other benefits	3.61	3.66	3.53	3.54	3.72	3.77	3.54	3.64	3.50	0.669	3.76	3.40	0.174

^aNormality distribution was violated in running the t-test.
 * $P < 0.01$; ** $P < 0.001$; *** $P < 0.05$.
 Sig, Significance.

can be used internationally ($P < 0.01$), where older respondents consider the possibilities of international use. Sex is significant in evaluating debt ceiling ($P < 0.001$), where females pay more attention to debt ceiling than males. The level of education is also significant in evaluating debt ceiling ($P < 0.05$), where highly educated respondents pay more attention to debt ceiling. Further, the level of education is significant in evaluating interest rate ($P < 0.01$), where less-educated respondents pay more attention to interest rate. H1 is partially supported.

The results of the *t*-test for the types of purchase made with credit cards are shown in Tables 7 and 8. The influence of age is significant in making payments for durables, where younger groups make more payments for durables than otherwise. Sex is significant in making payments for medical expenses ($P < 0.05$), where females use it more than males. Marital status ($P < 0.01$), the highest level of education ($P < 0.01$) and debt ceiling ($P < 0.05$) are significant in payments for eating out/entertainment, where singles, the less-educated and credit card holders with low debt ceiling use it for eating out/entertainment than otherwise. The highest level of education ($P < 0.01$) and debt ceiling ($P < 0.01$) are significant in making payments for utility bills and mortgage, where the highly educated and credit card holders with high debt ceiling use more for utility bills and mortgage than otherwise. H2 is partially supported.

Table 9 shows the results of how respondents generally handle monthly payments on credit cards. Thirty-one per cent of the respondents with higher level of education and 25% of respondents with higher credit card debt ceiling tend to pay their balance in full upon receiving the account statement than otherwise. However, over 80% of the total respondents, and over 74% of respondents across all demographic and socio-economic strata tend to make a payment that is greater than, or equal to, minimum payment due.

The results of the regression analysis are shown in Table 10. The four factors of the consumer awareness of credit cards are significant by debt ceiling, marital status, income and the highest level of education. That is, debt ceiling contributed significantly to awareness of personal financial literacy, indicating that it could account for 10% of the variance (R^2 adjusted = 0.102). Marital status contributed significantly to awareness of complementary/competitive credit card systems, indicating that it could account for 5% of the variance (R^2 adjusted = 0.047). Income and debt ceiling contributed significantly to awareness of credit risk, indicating that these two variables could account for 7% of the variance (R^2 adjusted = 0.074 in model 2, ΔR^2 : $P < 0.05$). The highest level of education contributed significantly to awareness of alternative forms of credit, indicating that it could account for 2% of the variance (R^2 adjusted = 0.022). Therefore, H3 is partially supported.

Three of the four factors of the reasons for obtaining credit cards are significant by debt ceiling, the length of credit card ownership and sex. That is, debt ceiling and the length of credit card ownership contributed significantly to transaction convenience, and marketing and communication programmes, indicating that these two variables could account for 12% of the variance in transaction convenience (R^2 adjusted = 0.121) and 7% of the variance in marketing and communication programmes (R^2 adjusted = 0.070 in model 2, ΔR^2 : $P < 0.05$) respectively. The length of credit card ownership and sex contributed significantly to short-term financial support, indicating that these

Table 7 Types of purchase made with credit cards by age, sex, marital status and the highest level of education

	Age			Sex		Marital status			Education				
	Total mean (n = 177)	35 years or less (n = 99)	More than 35 years (n = 78)	Sig (two-tailed)	Male (n = 136)	Female (n = 41)	Sig (two-tailed)	Single (n = 43)	Married (n = 134)	Sig (two-tailed)	Low (n = 148)	High (n = 29)	Sig (two-tailed)
Food and clothing	4.83	4.81	4.86	0.438	4.82	4.87	5.38	4.75	4.85	0.311	4.86	4.64	0.150 ^a
Medical	3.40	3.38	3.42	0.780	3.35	3.66	0.080*	3.46	3.38	0.630	3.36	3.58	2.33
Utility bills and mortgage	3.68	3.58	3.84	0.128	3.65	3.83	0.385	3.50	3.74	0.217	3.60	4.25	0.007**
Travel/vacation	3.86	4.00	3.80	0.587	4.00	3.60	0.269	3.80	3.90	0.787	3.83	3.88	0.876
Eating out/entertainment	3.82	3.90	3.71	0.151	3.85	3.68	0.347	4.14	3.72	0.002**	3.90	3.47	0.010**
Petrol	3.56	3.54	3.60	0.835	3.55	3.60	0.894	3.42	3.60	0.558	3.55	3.66	0.782
Durables	2.26	2.48	1.82	0.014**	2.33	2.19	0.580	2.31	2.23	0.797	2.26	3.33	0.871

^aNormality distribution was violated in running the t-test.

*P < 0.05; **P < 0.01.

Table 8 Types of purchase made with credit cards by monthly income, the length of ownership and debt ceiling

	Monthly income			Dependents		Length of ownership			Debt ceiling			
	Rs 35 000 or less (n = 100)	More than Rs 35 000 (n = 77)	Sig (two-tailed)	Two or less (n = 91)	More than two (n = 86)	Sig (two-tailed)	Less than 5 years (n = 82)	5 years or more (n = 95)	Sig (two-tailed)	Rs 50 000 or less (n = 130)	More than Rs 50 000 (n = 47)	Sig (two-tailed)
Food and clothing	4.81	4.85	0.548	4.79	4.87	0.297	4.48	4.86	0.382	4.85	4.78	0.389
Medical	3.38	3.42	0.780	3.41	3.40	0.967	3.44	3.37	0.599	3.33	3.61	0.139 ^a
Utility bills and mortgage	3.64	3.76	0.472	3.82	3.58	0.141	3.65	3.71	0.716	3.57	4.06	0.010*
Travel/vacation	4.20	3.70	0.161	4.00	3.71	0.408	4.25	3.72	0.361 ^a	4.20	3.70	0.161
Eating out/entertainment	3.88	3.75	0.317 ^a	3.93	3.71	0.106	3.90	3.75	0.260 ^a	3.90	3.60	0.075**
Petrol	3.55	3.58	0.894	3.55	3.57	0.948	3.64	3.50	0.582 ^a	3.58	3.50	0.766
Durables	2.24	2.31	0.797	2.27	2.25	0.934	2.29	2.24	0.823	2.20	2.44	0.411

^aNormality distribution was violated in running the t-test.

*P < 0.01; **P < 0.05

Table 9 The way users generally handle monthly payments on credit cards (in percentages)

	Age (years)		Sex		Marital status			Education		Monthly income		Dependents		Length of ownership		Debt ceiling	
	35 or less (n = 99)	More than 35 (n = 78)	Male (n = 136)	Female (n = 41)	Single (n = 43)	Married (n = 134)	Low (n = 148)	High (n = 29)	Rs 35 000 or less (n = 100)	More than Rs 35 000 (n = 77)	Two or less (n = 91)	More than two (n = 86)	Less than 5 years (n = 82)	5 years or more (n = 95)	Rs 50 000 or less (n = 130)	More than Rs 50 000 (n = 47)	
Payment of total balance no payment due	13.6	12.1	15.4	13.2	14.6	9.3	14.9	10.1	31.0	18.2	15.4	11.6	12.2	14.7	9.2	25.5	
Payment made greater than minimum payment due	55.9	52.5	60.3	61.8	36.6	37.2	61.9	60.8	31.0	59.7	50.5	61.6	52.4	58.9	56.2	55.3	
Payment made equal to minimum payment due	26.0	32.3	17.9	21.3	41.5	51.2	17.9	25.7	27.6	35.0	29.7	22.1	31.7	21.1	33.1	6.4	
Unable to pay at least minimum	4.5	3.0	6.4	3.7	7.3	2.3	5.2	3.4	10.3	7.8	4.4	4.7	3.7	5.3	1.5	12.8	
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	

two variables could account for 8% of the variance (R^2 adjusted = 0.079 in model 2, $\Delta R^2: P < 0.05$). However, lifestyle facilitator, which is one of the factors of reasons for obtaining credit cards, was not predicted by any of the demographic and socio-economic characteristics investigated in the study. Overall, H4 is partially supported.

Four of the five factors of lifestyle outcomes of credit card usage are significant by debt ceiling, sex, income and marital status. That is, debt ceiling contributed significantly to indebtedness, indicating that it could account for 6% of the variance (R^2 adjusted = 0.064). Sex, income and debt ceiling contributed significantly to access to mainstream society, indicating that these three variables could account for 18% of the variance (R^2 adjusted = 0.177 in model 2, $\Delta R^2: P < 0.01$). Marital status contributed significantly to facilitated commerce, indicating that it could account for 2% of the variance (R^2 adjusted = 0.020). Sex contributed significantly to financial confidence, indicating that it could account for 6% of the variance (R^2 adjusted = 0.059). However, enhanced spending, which is one of the factors of lifestyle outcomes of credit card usage, was not predicted by any of the demographic and socio-economic characteristics investigated in the study. Overall, H5 is partially supported.

The result of the consumer attitudes towards governmental intervention to help consumers make informed choices on competitive credit card offerings is also shown in Table 10. Debt ceiling and income contributed significantly to this factor, indicating that these two variables could account for 8% of the variance (R^2 adjusted = 0.084 in model 2, $\Delta R^2: P < 0.05$).

Conclusions and implications

The purpose of the current research was to enhance the understanding of consumer credit card ownership and usage practices. We applied quantitative data collection and analysis techniques to capture the dimensions investigated in this study. Further, the study made an attempt to assess the impact of demographic and socio-economic characteristics of credit card users on consumer attitudes towards credit card ownership and usage practices. It could be expected that the findings of this study would lead to the advancement of this area as a field of inquiry, as marketing concepts, propositions and research constructs pertaining to credit card ownership and usage behaviour are primarily based on a Western research. Further, the findings could be used to assist credit card lenders to apply strategic decisions in developing and applying marketing strategies, and governmental institutions to help consumers make informed choices on competitive credit card offerings.

It was found that respondents have four broad motives for using credit cards. Credit cards serve as a payment device in lieu of cash for routine purchases as well as for transactions that would otherwise be inconvenient, or perhaps impossible. Further, credit cards help consumers to access a level of participation in contemporary consumer culture that is different from what would be possible in its absence. Furthermore, targeted marketing and communication programmes of credit card lenders also motivate potential customers. Consumers also use credit cards as a mode of short-term financing and realize that savings may result by paying later. Respondents are aware of the four broad aspects of credit cards,

Table 10 Summarized results – stepwise regression analysis

Variable	β	R^2 (adjusted)	ΔR^2
Consumer awareness of credit cards			
F1: Personal financial literacy			
Debt ceiling	0.327*	0.102	
F2: Complementary/competitive credit card systems			
Marital status	0.230*	0.047	
F3: Credit risk			
Model 1: Income	0.251*	0.057	
Model 2: Income	0.316*	0.074	0.023**
Debt ceiling	-0.165**		
F4: Alternative forms of credit			
The highest level of education	0.167*	0.022	
Reasons for obtaining credit cards			
F1: Transaction convenience			
Model 1: Debt ceiling	0.323*	0.099	
Model 2: Debt ceiling	0.359*	0.121	0.027**
The length of credit card ownership	-0.168**		
F3: Marketing and communication programmes			
Model 1: Debt ceiling	-0.254***	0.054	
Model 2: Debt ceiling	-0.213	0.070	0.021**
The length of credit card ownership	-0.150		
F4: Short-term financial support			
Model 1: The length of credit card ownership	0.245***	0.054	
Model 2: The length of credit card ownership	0.244***	0.079	0.030**
Sex	-0.173**		
Consumer attitudes towards lifestyle outcomes of credit card usage			
F1: Indebtedness			
Debt ceiling	-0.263*	0.064	
F2: Access to mainstream society			
Model 1: Sex	-0.354*	0.120	
Model 2: Sex	-0.337*	0.141	0.025**
Monthly income	0.160**		
Model 3: Sex	-0.285**	0.177	0.041***
Monthly income	0.258***		
Debt ceiling	-0.228***		
F4: Facilitated commerce			
Marital status	0.160**	0.020	
F5: Financial confidence			
Sex	0.173***	0.059	
Consumer attitudes towards governmental intervention			
Model 1: Debt ceiling	0.262*	0.063	
Model 2: Debt ceiling	0.332*	0.084	0.026**
Monthly income	-0.175**		

* $P < 0.001$; ** $P < 0.05$; *** $P < 0.01$.

namely, personal financial literacy, complimentary/competitive credit card systems, credit risk and alternative forms of credit. Further, respondents' motives for holding credit cards, their awareness of the different aspects of credit cards and the criteria used to evaluate alternative sources of credit cards differ significantly by some of the demographic and socio-economic characteristics of the credit card users.

Respondents' use of credit cards for day-to-day expenses and credit card spending on durables is low. Although previous studies found significant differences in making payments for household goods, clothing, entertainment, travel and food away from home by sex (see Lindley *et al.*, 1989; Hayhoe *et al.*, 2000; Kaynak and

Harcar, 2001), this study found significant differences only in making payments for medical bills, where females tend to pay medical expenses more than males. The impact of marital status is also significant, where single respondents tend to pay more for eating out/entertainment than married respondents. Further, the level of education is also significant in making payments for utility bills and mortgage, and eating out/entertainment, where highly educated respondents spend more on utility bills and mortgage while less-educated respondents spend more on eating out/entertainment. Although previous studies indicated that income and the number of dependents in the family influence the types of purchase (see Delener and Katzenstein, 1994), the findings of

this study did not support those claims. With regard to payment practices, the percentage of respondents who tend to pay their balance in full upon receiving the account statement is low. Exceptions could only be found in the strata of the highly educated and high credit card debt ceiling, where a considerable percentage of those who belong to these two strata settle their bills on time. Overall, the findings suggest that very high percentage of respondents across all demographic and socio-economic strata tend to use credit card as a mode of financing and elect to pay interest charges on outstanding credit card balances. This could result in a growing share of consumers' debt through incremental borrowing.

In connection to the above, the findings suggest five broad lifestyle outcomes of credit card usage, with one of the outcomes being indebtedness. Further, findings suggest that the probability, speed and magnitude of spending could be enhanced in the presence of credit cards. Hence, a higher level of purchasing expenditure and purchasing item volume could result. The habitual use of credit cards could become an addiction and could lead to difficulties in personal financial practices. This situation could be worsened if individuals tend to spend based on their anticipated future income as most people in general anticipate higher incomes. Consumers also value the symbolism expressed by credit cards that allows them to access mainstream contemporary society. Further, consumers' attitudes towards credit card debt have changed considerably, and individuals tend to see credit cards as a convenient and relatively painless way of spending, and that debt has become more socially acceptable. The benefits of facilitated commerce and greater levels of confidence that credit cards provide in spending may influence individuals to accept the dependence on credit cards as an accepted part of everyday life and to approve of them.

Credit cards offer service to customers. This service is a 'performance' rather than a 'thing'. There are more experience and credence qualities with services than search qualities. Further, the experience attributes it has can only be assessed after purchase or during consumption. Therefore, consumers may find difficulties in evaluating credit cards pre-purchase. Hence, choosing an economically appropriate credit card requires knowledge of one's credit card usage and comparison information on credit card costs. However, information about fees, interest rates and the methods of calculating interest charges is often incomplete and hard to understand (see d'Astous and Miquelon, 1991). As information availability is a fundamental component of the free market system, the lack of information about credit cards could be considered as a threat to market competitiveness and to consumer interests. This creates a need for governmental intervention to help consumers compare competitive credit card offerings and the costs of credit cards. Such consumer awareness campaigns would help consumers make informed choices on credit cards and alternative sources of credit. Especially, in a time period where credit cards are aggressively marketed and sold not only to pre-selected groups of individuals, typically in upper income, well-educated and highly regarded occupation groups, but also to non-traditional markets, such as students, and working and middle-class families, by relaxing eligibility standard and requirements.

Limitations and future research

The study is confined to a convenience sample of 177 individuals employed/self-employed in Colombo metropolitan area. Indi-

viduals with one of the three main types of credit cards were taken into account. However, the influence of possessing multiple credit cards by an individual has not been explored. The study had not explored credit history and credit card debt to identify factors influencing the amount of, and changes in, consumer debt held by households. Although findings suggest that credit cards could result in a higher level of purchasing expenditure and purchasing item volume, it is not clear whether high spenders gravitate towards credit card usage. Hence, cause and effect relationship between credit cards and spending has yet to be adequately explored. Overall, issues involved with possession, utilization, the repayment of credit card debt and lifestyle outcomes are numerous, and a single study cannot be expected to address them all. Research is needed to complement the findings.

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Appendix 1 Income and expenditure data

	1995/1996	2002	2005	2006/2007
Mean household income per month (Rs ^a)	6476	128.3	20 048	26 286
Median household income per month (Rs)	3793	8 482	13 617	16 735
Gini coefficient of household income	0.46	0.47	0.47	0.49
Household size (number)	4.5	4.2	4.1	4.1
Number of income earners per household	1.8	1.8	1.9	1.8
Mean income earners' income per month (Rs)	3367	6 959	10 563	14 457
Gini coefficient of income earners' income (Rs)	0.52	0.53	0.55	0.55
Monetary income per month per household (Rs)	5264	10 386	17 089	22 616
Non-monetary income per month per household (Rs)	1212	2 419	2 959	3 671
Mean household expenditure per month (Rs)	6525	13 147	19 151	22 952
Expenditure on food and drink (Rs)	3552	5 848	7 593	8 641
Expenditure on non-food and drink (Rs)	2753	6 993	11 079	14 311
Expenditure on liquor and tobacco (Rs)	219	3.6	479	492
Food ratio (percentage)	54.4	44.5	39.6	37.6

^a1 US\$ = 108 Sri Lankan rupees (as of 30 September 2008).

Source: Department of Census and Statistics (<http://www.statistics.gov.lk>).

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