CREDIT CARDS AS A DETERMINANT OF SOCIAL CAPITAL: A STUDY OF RATIONAL BEHAVIOUR OF URBANISED CONSUMERS

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Abstract

This study intends to develop a theoretical framework to show credit card usage as a determinant of social capital of people who are living in urban societies in developing economies. Data were instrumented by a questionnaire. A survey of citizens of Kandy City area of Central Province of Sri Lanka was conducted to gather data for the study. Logistic regression, one-way ANOVA, and chi-square/Fisher exact tests were used to analysis data empirically to achieve research objectives. The results indicated that socio-economic & socio-demographic variable namely; life insurance, cash savings, and occupation status are significant determinants of credit card usage. Gender, age, education, race, and income of respondents are reported as insignificant factors to have credit cards. Further, three out of four specific proxies of social capital namely; the degree of participation in societal activities, membership in credit association, and membership in the professional body have shown as significant determinants of credit card usage. Membership in credit societies has shown negative effect to have credit cards. In addition, membership in community welfare societies is recorded as insignificant factor to usage of credit cards. Accordingly, study results concluded that credit card usage of consumers of urban area in Sri Lanka is a good indicator of perceived social capital. This signals that promotional programme of credit cards by financial institutions among urban people could be implemented through social networks.

Keywords: *Credit cards, rational behaviour, social capital, Sri Lanka, urbanised consumer*

JEL Classification: *A13, D14, D71*

I. INTRODUCTION

Materialistic goals of rational consumers in the present market have been gradually dominant over the development of technology and society (Garðarsdóttir and Dittmar, 2012). As a result, consumers' compulsive buying behavior has motivated the usage credit cards. In Sri Lanka, for an instance, the amount of credit cards in use has reached to 1,253,866 in total at the end of August 2016 (Central Bank of Sri Lanka, 2016). Reports further said that it is an increase of 27,000 credit cards in compared to the previous month. Credit cards are getting this popularity as they function for multi-purpose of customers (Kim and DeVaney, 2001) and inherited benefits of customers. Personal and household debt (Wang et al., 2011), immediate money (liquidity) (Bertaut and Haliassos, 2005), purchasing power(Mendes-daSilva et al., 2012), transactions security (Macgee, 2012) and some social benefits like social status, social capital as well are identified as main purposes of using credit cards. Based on above aspects, several researchers are on the view that credit card usage is not depending only on economic factors but also on socio-economic, individual financial willingness, factors on individuals' and groups' behavioral and psychological characteristics of people.

Scholars of this field have adequately addressed most of financial aspects related to credit cards in detail in case of developed and developing economies. But the social aspects of credit card usage are not addressed adequately specially in developing contemporary economies. Several studies have concluded that credit cards usage should be studied beyond its financial aspects (Lyons, 2004; Wang et al., 2011; Tan et al., 2011). According to these researchers, these economies are high financial risk with problems such as insolvency, management of financial resources, individual debt problems leading to health problems like stress and anxiety (Keese and Schmitz, 2010). Addressing this knowledge gap, this study intends to develop a theoretical model to

show credit card as a determinant of social capital in developing economies. Accordingly, socio-demographic characteristics, purchasing of insurance policies and networking of individuals and teams will be analyzed in the event of obtaining and usage credit cards by people in urban areas.

The remainder of the paper is organized as follows. The second section is reserved for literature review of the study. The methodology of the study is explained in the third section. Data analysis is carried out in section four and section five provides the concluding remarks and recommendation.

II. LITERATURE REVIEW

A credit card was firstly introduced as a result of industrial revolution in the United States. This was a clear indication of assurance of consumer's credit to business and other service providing organisations. However, previous studies are certain that usage of credit cards influences to consumption pattern of consumers. According to Friedman and Modigliani who developed permanent income hypotheses or life cycle consumption hypothesis, all individual who holds a credit card is abide by the responsibility of spending or borrowing decisions without any influence by a third party (Scott, 2007). Arguably, Veblen's institutional theory about consumption mentions that credit card usage or willingness to have is determined by both individual and societal factors. Veblen explained further that showing social status in the community through credit cards has become common for most communities. According to his view, this phenomenon has created unnecessary financial problem in households as well. Based on permanent income hypotheses and Veblen's institutional theory, the following two paragraphs will review possible individual and societal factors which can influence the usage of credit cards

Socioeconomic factors of individuals who are having credit cards have been identified as influential factors to credit card usage. Specifically, income of the individuals has shown a great influence of having a credit card (Slocum & Mathews, 1970, Yayar & Karaca, 2012). Apart from the income, Huang & Shen (2010) mentioned about occupation of individual has a great role to play in case of obtaining and usage of credit cards. Other individual level factors like race, gender, educational level and savings are concerned, mostly, they have been identified as important and influential factors on credit card usage (McCloud, 2006). According to Scott (2007), rise in education of individuals is positively correlated with rise of human capital of individuals. Accordingly, that author argues that people who are having sound education are much oriented to use new, easy and flexible technology. Individual savings also make people financially stable (José Francisco Martínez Sánchez, Gilberto Pérez Lechuga) and would be much willing to taste their preferences. As a result, people who are having enough savings would feel comfortable to use credit cards.

As explained in two theories above, other than individual factors, social factors are also so important indicators to predict credit card (Koivunen & Tuorila, 2015). Considering most of the aspects in the society, social capital is identified as a concept to study credit card usage in this research. Particularly, people networking or interact with others would influence to usage of credit cards. Lewis & Weigert, (1985) mentioned that people who are living in present day are obliged to have connection in the society. Networking may depend on trust, honesty and mutual benefits. Accordingly, individuals have to change their behavior in line with social requirements (Solomon & Flores, 2001). However, based on literature, this research serves three indicators namely membership in a community welfare society, the degree of participation of a community nets, membership of a community credit association, and membership in a professional community as predictor variable of social capital.

III. STUDY AREA AND METHODOLOGY

STUDY AREA

This study intends to examine usage of credit cards as a determinant of social capital in urban areas in developing economies. Kandy municipal council area was selected for the field survey. Presently, it is the provincial capital of Central region of Sri Lanka (please see figure no 1) and the second largest city in the country. The city is located 110km away from Colombo, the capital of Sri Lanka and on Latitude North $7^0 17^/ 47^/$ and East $80^0 38^/ 6^/$. The urban population is 158,564 and majority is represented by Sinhalese (74.55%) in the city. Sri Lanka moors (10.9%), Sri Lanka Tamil (9.59%) and Indian Tamil, Burgher, Malay make up sub-ethnics are also resided in Kandy city area (Department of Statistics, 2012).
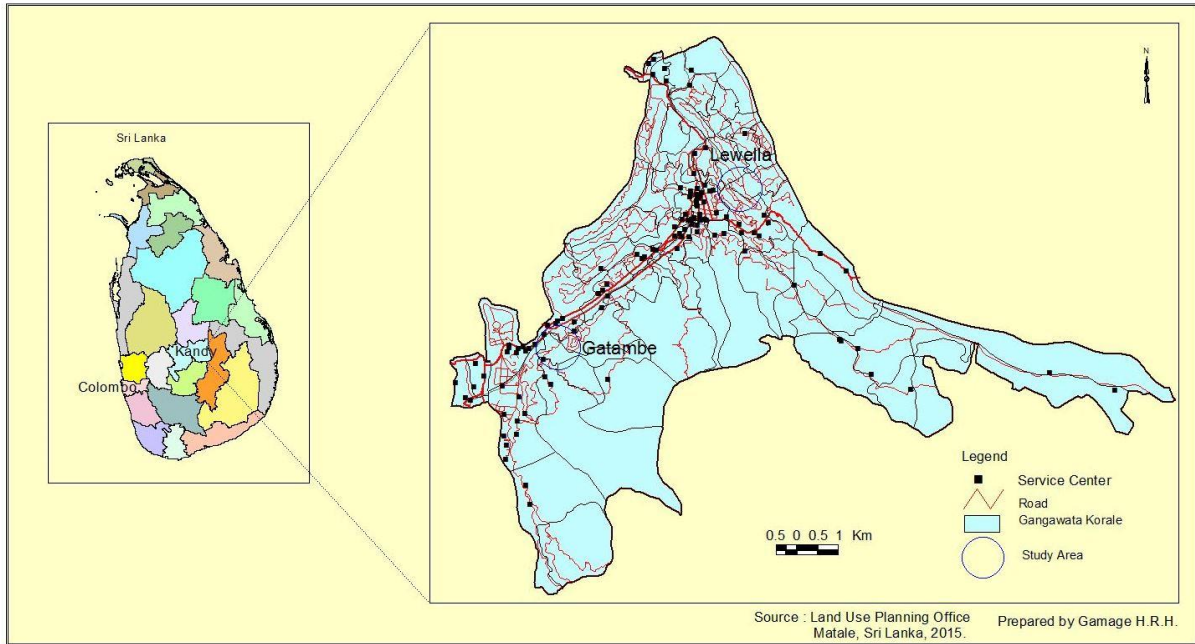
Figure 1: Location of Kandy city in Gangawata Korale DS, Central Province of Sri Lanka and survey area

DATA SOURCE

The survey accommodated a total of 162 respondents that were selected from different GN areas in Kandy city using a multi-stage simple random sampling technique. A questionnaire as the tool for data collection targeted to collect data on socio-economic characteristics, demand for credit cards, and social capital of the sample. The measurements were adapted from previous research studies mainly from social capital. In general, social capital is mainly identified at three levels, namely, national (Fukuyama, 1995), society or community (Putnam, 1995) and individual levels (Glaesar et al., 2000). In this research, data at individual levels were employed considering community level factors. The field survey was carried by three enumerators in December, 2015.

MEASUREMENTS IN VARIABLES

The main focus of this study is to examine factors effecting to demand for credit cards of rational consumers in urban areas in Sri Lanka. The dependent variable appears as dichotomous variable inquiring the respondents' usage of credit card at the time (do you use a credit card?). The key independent variable of this study is social capital. Social capital was measured and evaluated with four specific proxies of perceived social capital namely membership in a community welfare society, the degree of participation of a community nets, membership of a community credit association, and membership in a professional community. Variable is considered as dichotomous variable (see table no 1for more details). This variable also serves as an independent variable in the model. Some socio-economic characteristics namely gender, age, education, race, income, insurance policy, and cash saving, occupation status were included to the empirical model (see table no 1for more details).

Table 1: Description of variables in the empirical model

Outcome variable	
Demand for credit card	=1 if having a credit card or planning to purchase =0 otherwise
Predictor variables	
Socio-economic & demographic	
-Gender	1= male, 0 = female
-Age	age of the respondent(years)
-Education	1 = tertiary, 0 = otherwise
-Race	1 = majority, 0 = otherwise
-Income	monthly income(LKR)
-Life insurance policy	1 = having insurance a policy, 0 = otherwise

-Cash savings	1 = having formal saving, 0 = otherwise
-Occupation status	1 = monthly salary, 0 = otherwise
Proxies on social capital	
-Membership in community welfare society	1 = yes, 0 = otherwise
-Degree of participation of in community nets	1 = active/leader, 0 =otherwise
-Membership in community credit society	1 = member of credit society, 0 = otherwise
-Membership in professional body	1 = member of professional body 0= otherwise

Source: compiled by authors, 2015.

DATA ANALYSIS

Data analysis was carried out using SPSS version 21 to achieve study objectives. Descriptive statistical analysis together with one-way ANOVA and chi-square/Fisher exact test, and binary logistic regression were supported to analyse data. The binary logistic regression was undertaken to identify factors affecting residents' demand for credit cards. This model is identified as an appropriate model to study the effect of both continuous and/or categorical independent variables on a dichotomous dependent variable (Ronald and Yates, 1938: Collett, 1991: Adem et al., 2012: Reed and Wu, 2013).

IV. RESULTS AND DICUSSION

The model of this study is consisted with two quantitative predictors and ten categorical predictors as explained in the methodology of this study. Further, total respondents were divided into two groups by considering credit card ownership. There were 57 respondents who are having a credit card which of roughly around 35% of the sample. One-way ANOVA and chi-square test or fisher exact test were used respectively to examine the mean differences and percentages differences among card holders and non-card holders (please see table no. 2).

As shown in the table no. 2, the mean age of credit card holders is 45.65yrs and 43.90yrs is reported for non-credit card holders. But non-credit card holders in this study are reported as insignificant statistically. Furthermore, the mean monthly income of card holders and non-holders has been calculated as 50631.58LKR and 32004.76LKR respectively indicating a significant different of two groups. The majority of card holders (80.70%) and non-holders (87.61%) are represented by male respondents. However, these two groups were reported as insignificant. According to the Fisher exact significant statistics, a significant difference is identified between credit card holders and non-holders in case of tertiary education. When credit card users are concerned, 33.33% of them have studied up to tertiary education level. Besides, the variables of life insurance holdership, cash savings, and income from salary are reported a significant difference between two groups namely credit card holders and non-holders. However, the race of the respondents of these two groups has shown as insignificant. When proxies of social capital are concerned, a significant difference is shown between card holders and non-holders in case of active participation in community nets, membership in credit associations, and membership in a professional body. However, a respondents' membership in community welfare society is reported as statistically insignificant.

Table 2: Descriptive statistics, ANOVA & Chi square test results

Variables	Cards holder		Non holder		Remarks
	Mean	%	Mean	%	
Age	45.65		43.90		insignificant
Monthly income	50631.58		32004.76		significant
Male respondents		80.70		87.61	insignificant
Tertiary education		33.33		19.04	significant
Majority people		78.94		78.09	insignificant
Life insurance holders		52.63		11.43	significant
Having savings in hand		98.24		72.38	significant
Income (salary)		56.50		54.28	significant
Membership in community welfare societies		70.17		78.09	insignificant
Degree of participation in society/networks		57.89		26.66	significant
Membership in credit associations		28.07		52.38	significant
Membership in professional bodies		71.93		58.09	significant

N.B*: one-way ANOVA was employed to examine the mean differences and chi square/fisher exact test was employed to examine the percentage differences. Significant level is 0.05, n=162.*

REASONS TO HAVE A CREDIT CARD

Among the 162 respondents of this study, 57(35.19%) are identified as credit card holders or as people who are planning to purchase a credit card facility in the near future. At the same time, several reasons are given by respondents about their choice of having a credit card. As indicated figure no.1, among all reasons 47.36% of respondents have chosen credit cards because of transaction security. Online buying facility (29.82%), maintaining social status (35.08%), and universal acceptance (35.08%) are also stated as other reasons. Besides this, 87 % of credit card holders stated financial emergencies as a reason to having a credit card.

Figure 2: the main reasons to have a credit card
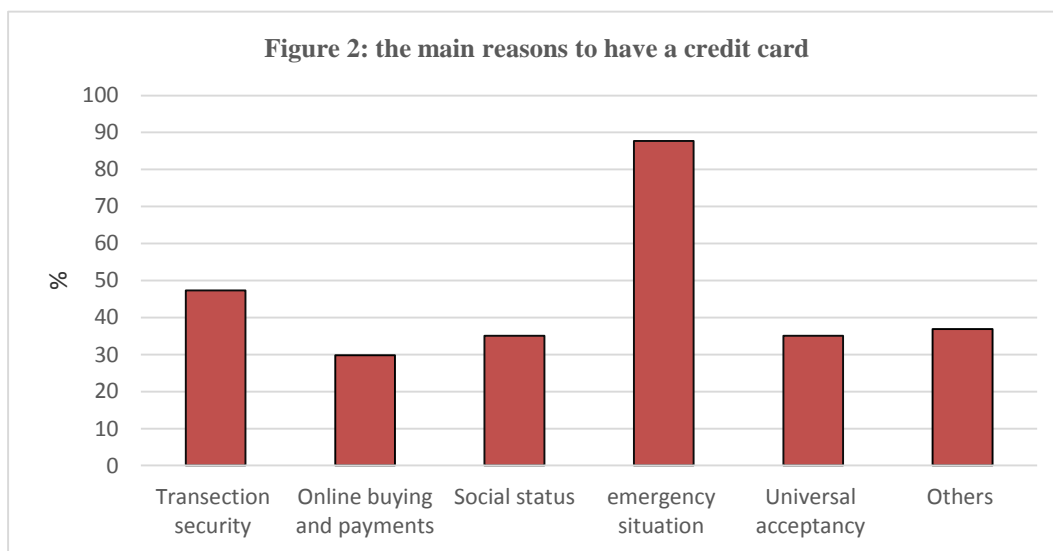
LOGISTIC REGRESSION MODELLING FOR DETERMINANT OF CREDIT CARDS

The logistic regression model was employed to find out the likelihood of determinants of credit cards usage in urban areas in Sri Lanka. First, multicollinearity is tested between predictor variables (Leech et al., 2005). The mean value of variance infected factor (VIF) was 1.14 and the collinearity statistics confirmed that there is no multicollinearity in predictors of the empirical model. The statistics confirmed that the model is empirically reserves the goodness of fit and statistically significant. In addition, Omnibus test of statistics confirms that the empirical model is statistically significant at 0.001 and 42% of variation is explained by the model. As well as, the logistic model with all variables has provided 82.7% of accuracy of the prediction.

Table 3: logistic regression results for factors effecting on credit cards usage

Variables	β	EXP(β)	95% C.I EXP(β)		Remarks
			Lower	Upper	
Socio-economic & demographic variables					
Gender	-.595	.552	.138	2.199	insignificant
Age	.014	1.014	.978	1.051	insignificant
Education	.506	1.659	.508	5.414	insignificant
Race	-.085	.918	.282	2.991	insignificant
Income	.000	1.000	1.000	1.000	insignificant
Insurance	3.112	22.460	5.598	90.120	significant
Saving	3.573	35.623	3.503	362.291	significant
Occupation	1.137	3.117	1.336	7.277	significant
Proxies on social capital					
Membership in community welfare society	.307	1.359	.440	4.193	insignificant
Degree of participation in society/networks	1.468	4.341	1.696	11.110	significant
Membership in credit association	-1.287	.276	.101	.754	significant
Membership in professional body	1.142	3.132	1.109	8.850	significant
Constant	-7.489	1.837			significant

N.B: significant level is 0.05
Source: Authors calculation from the survey data 2015

According to the results of logistic regression (Table no 3), some of socio-economic & demographic variables, namely life insurance policy, cash saving, and occupation of respondents are significant factors affecting to purchasing or planning to have a credit card. Gender, age, education, race and income of respondents are reported as statistically insignificant. In addition, regression results indicated that those who have life insurance policy is more like to purchase a credit card facility and odds ratio for life insurance holding reviews that it is of 22 times more likely to get a credit card than those who do not have a life insurance (95% C.I OR: 5.598-90.120). Savings in a formal institution could also be identified as other significant factor of purchasing a credit card. As indicated odds ratio for savings, those who are making savings in the formal sector is 35.6 times more likely to use a credit card than others even after controlling the effect of independent variables (95% C.I OR: 3.503-362.29). Beside this, another significant socio-economic variable is occupation status which indicates a positive effect on having a credit card and those who are employed in public or private sector for monthly salary is likely to having a credit card 3.1 times more than who those who are engaged in business related jobs in Kandy urban area, Sri Lanka.

As shown the logistic regression results in the table 04, some of the proxies on perceived social capital of respondents are statistically significant. Membership in community welfare society is reported as insignificant while the degree of participation of community networks, membership in a credit association and membership in the professional association indicated as significant. This reveals that individuals with higher level of participation (who is an active member/community leader) of community networks were more likely to use a credit card than the respondents of making lower level participation in community nets. Odds ratio for the proxy is reported as 4.34 time more likely than other variable (95% C.I OR: 1.696-11.110). However, membership in any credit association has affected negatively to have a credit card. Individuals who are engaged in credit association are less likely to use or get a credit card than those who do not engage with credit association even after controlling the effect of another explainer variable. However, it is reported as very little negative effect on demand for credit cards (95% C.I OR: 0.101- 0.754). In addition, the results indicate that individuals with membership in a professional body such as working place, community or outside community were more likely to use a credit card than those who do not have a connection to professional bodies. The figure represents a three times more likely to use a credit card than others (95% C.I OR: 1.109- 8.850).

V. CONCLUSION

This study focuses to develop a theoretical framework to show credit card usage as a determinant of social capital of people who are living in urban societies in developing economies. Accordingly, the analysis was performed to see the relationship of social capital and social demographic characteristics over demand of credit cards of people who are living in urban areas in Sri Lanka. Logistic regression results confirmed that some of socio-economic factors have significant impact on the decision of individuals to have a credit card. Among these socio economic factors, indicators like insurance, savings, and occupation with monthly salary were identified as significant factors to have credit cards by urbanised individuals. However, other socio-economic characteristics have shown statistically insignificant results in the model. In Sri Lankan socio-economic context is concerned, the middle income earners are living in urban areas maintaining average life standards. In order to represent the society well, those who are employed and having a permanent income monthly have shown their interest to have a credit card. The other important area which was concerned in the model is social capital of urbanised individuals. Four specific proxies which were recognised based on past literature were added to the model to classify credit card demand as determinants of social capital in urban society. Three proxies out of four, namely the degree of participation of community networks, membership in a credit association and membership in the professional association were statistically significant. Further, this was a clear indication of bahaviour of rational urbanized consumers. When an individual represents as a middle income earner in the society, he or she is supposed to have a credit card simply to represent the society they live. It would be identified as primary purpose of using a credit card in urbanised society. Findings of the study have clearly shown the practical implication. This implications is much important to people or institutions which are engaged in promotional programme of credit cards. Accordingly, findings of this study signals that promotional programme of credit cards should be more oriented through social networks than other channels in urbanised societies.

This study is remained with some limitations as well. This kind of empirical study would be better to carry out as longitudinal study. Then the study findings would better reflect the society as data is gathered in two different time slots. However, this study was performed as a cross sectional study leaving a limitation. Further, generalisation of findings is easy when a study targets a specific group of respondents as the sample. Yet, this study treats individuals in general as people who are living in urban areas than specific. It is lead to a limitation. Sample size, cultural and political factors which have not been addressed adequately are also limitations of this study. Future research can be focused to study the same concept eliminating some of these limitations.

VI. ACKNOWLEDGEMENT

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