

# Factors Influencing the Adoption and Usage of Credit Cards in Financial Institutions of Rwanda: Case Study I&M Bank (Rwanda)

<sup>1</sup>KALISA Alfred, <sup>2</sup>Dr. Olweny Tobias, <sup>3</sup>Dr. MBERA Zenon

<sup>1,2,3</sup>Jomo Kenyatta University of Agriculture and Technology, Kigali, Rwanda

---

**Abstract:** The aim of this study was to examine the factors influencing the adoption of credit cards in financial institutions in Rwanda because there several factors affecting electronic banking adoption among financial institutions especially in developing countries. According to Jensen (2003), most countries in Africa, except South Africa, have Internet infrastructure only in their major cities and this make it hard for the citizen to use electronic banking effectively, coupled with culture since some of this technology is still a new innovation in people's life and is rendered useless because of culture. The researcher achieved this researcher by use of three specific objectives namely; to analyze the influence of level of income on the adoption of credit cards; to establish the effect of Credit cards Costs on adoption of credit cards and to examine the effect of credit card awareness on the adoption of credit cards. The researcher used descriptive method of study based on qualitative and quantitative approach in order to get better analysis of the study. He used both primary and secondary data collection tools with their relevant tools like questionnaire and documentary analysis in order to come up with required data. In the finding it was revealed that several factors which affect adoption and usage of credit card but analyzed factors like income level, credit card awareness and credit card cost affects adoption and usage credit cards. These factors affects usage of credit inform of purchasing of goods both within and outside the country. Using Spearman's correlation co efficiency model Table 11.9 gives the statistical evidences concerning the relationship between credit card cost and Adoption/usage of Credit Cards by Clients of I & M Bank. According to the results, sample size N is 62 and the significant level is 0.01, the results indicate that fixed pay has positive strong correlation on productivity equal to .955\*\* and the sig is .000 which is less than 0.01. When sig. is less than significant level, researchers conclude that variables are correlated. It is therefore concluded by the researcher that there is a statistically significant correlation between factors affecting usage of credit card and Adoption/usage of Credit Cards by Clients of I&M Bank, implying that they are many factor which affect adoption and usage of Credit Cards.

**Keywords:** Factors Influencing the Adoption and Usage of Credit Cards in Financial Institutions Of Rwanda.

---

## DEFINITION OF KEY TERMS:

### Credit Card:

A credit card is a card issued by a financial company giving the holder an option to borrow funds, usually at point of sale. Credit cards charge interest and are primarily used for short-term financing.

### Financial Institutions:

A financial institution is an establishment that conducts financial transactions such as investments, loans and deposits. Almost everyone deals with financial institutions on a regular basis. Everything from depositing money to taking out loans and exchanging currencies must be done through financial institutions.

### Credit card limit:

This is a dollar amount assigned to a cardholder as a limit of credit that they are approved to borrow. Credit card purchases are actually loans to the cardholder by the issuer. Approved transactions will deduct the dollar amount from the credit cardholders' limit, Kitch EW (1990).

**Credit Cardholder:**

An individual to whom a credit card is issued, or who is authorized to use an issued card. The cardholder is able to make purchases using the credit card, Allen Consulting Group (2001).

**ACH Credit:**

A transaction through the ACH network that results in money being placed in the receiver's account at the destination financial institution, Frontier Economics (2001).

**Acquiring Bank:**

The acquiring bank is the financial institution that maintains a contractual relationship with the merchant. Acting as a "middle man," the acquiring bank receives credit card transactions from the merchant or from the card acceptor, and then settles those transactions with the issuing banks, Bankcard Association of Australia (1999).

## **1. INTRODUCTION**

As the historical tells, depicting the agrarian society of about a hundred years ago. In rural areas, the proprietor of the local general store would extend credit to regular customers, and department stores in the cities would do the same. "When we were more of a farming nation, we were driven by credit. Every sort of general store in the more rural regions extended credit to farmers and others as a cost of doing business, Lewis Mandell, Kermit O (1990). Hanson visiting professor of finance and business economics at the Foster School of Business, University of Washington "In those days, credit was sort of a generalized, open-book credit."

The merchant would just record in his ledger the amount the customer owed, he explains. "The more farming-oriented a society was the more dependent they were on consumer credit." As urbanization grew, department stores made credit available to more middle-income customers, and it became necessary to implement a different method to track customer accounts. The first credit cards were simply made of cardboard or paper. Sometime in the 1920s, embossed metal plates like those of Army dog tags were introduced. "They could actually run these through a little roller and get a copy of the customer's card, Manning (2000)

The cards were generally associated with only one vendor, for instance, Macy's or Bloomingdales. The world had to wait until 1949 for the first universal card to be introduced. On February 28, 1950: A Diners club card, the first multiuse credit card was issued. This marked the beginning of the era of plastic money. Diner's card was launched in the Indian market in 1960. The Central Bank of India was the first bank in the country to introduce credit card system in August 1980, followed by several other banks. In India, both foreign and Indian banks are doing credit card business. The foreign banks have a dominant share due to various reasons like having been in the field for decades, sound operational and financial strength, strong brand reorganization etc. Later, with the aggressive entry of SBI, ICICI, and HDFC Banks the rules of the game changed.

Among the banks issuing credit cards, the esteemed and well published cards are Citibank Diner's Club Card, Citibank Visa Card and Credit Cards, Bank of Baroda's Master Cards, the SBI Credit Cards, Bank of India's India Card, Canara Banks Can Card and ICICI Bank's ICICI Card. These cards are positioned in a manner which gives an impression that the cards can be acquired by people from not only the upper class but also the middle income categories. The new private sector banks like ICICI and HDFC have adopted a strategy of reaching lower down the income strata by lowering down their eligibility norms. Today credit card industry is highly competitive and almost all the banks are offering credit cards in association with Visa International or Master Card. (Dr.S.Sudhagar, 2012, PP14)

Cohen (2005) stated that the force that affects the economy in the developed countries is the purchase done with credit cards when compared to individual saving which can also be true for developing countries. A number of studies like Nash (1993) found out that credit card lending specialization gives higher and more volatile returns than achieved by banks with conventional products mixes. Therefore this study is seeking to evaluate the factors influencing the adoption of credit cards in financial institutions in Rwanda.

The credit cardholders are not increasing compared to the debit cardholders, in 2011 the credit cardholders were 516 compared to 115,200 for debit cards represent 0.44%. In 2012, 428 credit cardholders while debit cardholders were

389,298 represent 0.11%. In 2013, credit cards holders increased to 845 compared to 487,498 for debit cards represent 0.17%. In 2014, credit cards holders went to 2,540 and debit cards were 638,869 represent 0.40 %.( NBR, 2015, pp42).

The evolution of Mobile payment from 2012 to 2014 is very high. In 2013, there is an increase of numbers of subscribers of 76.23% and 155.27% in 2014. This shows that mobile payment has been well adopted and use compared to the evolution of cards based payment in Rwanda (NBR, feb.2015, pp43)

## **2. PROBLEM STATEMENT**

As stated in electronic banking literature, there are several factors affecting electronic banking adoption among financial institutions especially in developing countries. According to Jensen (2003), most countries in Africa, except South Africa, have Internet infrastructure only in their major cities and this makes it hard for the citizen to use electronic banking effectively. This is coupled with culture since some of this technology is still a new innovation in people's life and is rendered useless because of culture. In some towns clients would leave ATM machine without any single individual using and queue for service on the counter, which justifies that adoption of credit card is still poor. In the Rwandan case, credit cards have been introduced a few years ago, but still their usage and effective adoption system remained largely unnoticed by customers. It is upon this that is why the researcher is prompted to examine the factors influencing the adoption of credit cards in financial institutions in Rwanda

## **3. RESEARCH OBJECTIVES**

### **a. General objectives:**

1. To examine the factors influencing the adoption of credit cards in financial institutions in Rwanda.

### **b. Specific objectives:**

1. To analyze the influence of level of income on the adoption of credit cards.
2. To establish the effect of Credit cards Costs on adoption of credit cards.
3. To examine the effect of credit card awareness on the adoption of credit cards.

## **4. RESEARCH QUESTIONS**

1. What is the influence of the level of income on the adoption of credit cards?
2. What is the effect of Credit cards Costs on adoption of credit cards?
3. What is the effect of Credit cards awareness towards the adoption of credit cards?

## **5. RESEARCH DESIGN**

The research was conducted based on quantitative approaches, which was designed to gain an in-depth understanding of current practice of credit cards in Rwanda. This research was a descriptive survey as a method of collecting information by administering questionnaires and it is used when collecting information about people's attitudes, opinions, feelings or preferences concerning one or more variables through direct question (Mugenda and Mugenda, 2003).

## **6. TARGET POPULATION**

The population of this research includes all I&M Bank (Rwanda) customers using electronic cards, and the target population concerns only customers with Visa Credit cards, because customers with credit card knew the importance of credit cards and the challenges associated with it. The target population is equivalent to one hundred and sixty customers (160), and this is the total of customers in I&M Bank (Rwanda) having VISA Credit card.

## **7. SAMPLE DESIGN**

The target population for the study consisted of I&M Bank customers having Visa Credit Cards and the sample of respondents was determined using simple random sampling, and the sample was composed of 62 people. Sampling is the process or technique of selecting a suitable sample or a representative part of a population, for the purpose of determining parameters or characteristics of the whole population (Merriam, 1993). The study employed simple random sampling to

achieve the desired sample size from various sub-sets in the population to ensure representation has all desired categories. Using Slovin formula, a sample was:

$$\text{Equation 1: } n = \frac{N}{1+N(e)^2}$$

Where by:

n=sample size

N= population size

e= 0.1= standard error

$$n = \frac{160}{1 + 160(0.1)^2}$$

$$= \frac{160}{1 + 1.6}$$

$$= \frac{160}{2.6}$$

$$= 62$$

### 8. SAMPLING TECHNIQUES

Sampling is the process or technique of selecting a suitable sample or a representative part of a population, for the purpose of determining parameters or characteristics of the whole population (Merriam, 1993). The study employed simple random sampling to achieve the desired sample size from various sub-sets in the population to ensure representation has all desired categories.

### 9. DATA COLLECTION INSTRUMENTS

The study utilized questionnaires; the questionnaire was constructed following the objectives of the study and administered to customers. The key informants' questionnaires were conducted with key individuals within customers; it provided project qualitative and quantitative information about impressions, experiences and opinions on the adaption of credit cards in financial institutions here in Rwanda. According to Claire, et al., (2006), questionnaires are used to describe a situation.

### 10. DATA ANALYSIS

Data analysis and interpretation of results have done by using the statistical package for social sciences (SPSS).

### 11. RESEARCH FINDINGS AND DISCUSSION

This chapter shows the results of the study analyzed from raw data collected from the field. Data was particularly analyzed according to the objectives of the study and research questions.

#### 11.1 Influence of level of income on adoption of credit cards:

Respondents views on the level of income and its influence on the credit card adoption in I&M bank

**Table 11.1: Analysis of level of income of clients of I&M Bank**

	N	Mean	Std. Deviation
My life style has made me to acquire quality goods	62	3.5234	1.61190
My life style makes me to acquire standard goods	62	3.7450	1.22396
My life style has made me acquire expensive goods	62	3.6363	1.42256
My life style has made me to acquire goods online	62	3.9735	1.01192
Valid N (listwise)	62		

The total respondents who participated in filling the questionnaire were 62 people. In ascertaining whether life style has made respondents acquire quality goods, this was revealed by a strong mean of 3.5234 and heterogeneity standard deviation of 1.61190. On whether the life style makes me to acquire standard goods, this was revealed by a strong mean of 3.7450 and heterogeneity standard deviation of 1.22396. In analyzing whether life style has made me acquire expensive goods, this was revealed by a strong mean of 3.6363 and heterogeneity standard deviation of 1.42256. Lastly the analysis

wanted to ascertain whether life style has made me to acquire goods online, this was revealed by a strong mean of 3.9735 and heterogeneity standard deviation of 1.01192. In summary it can be said that to some extent levels of income affects the way customers spend their money.

**Table 11.2: Influence of Level of Income on Adoption of Credit by Clients of I&M Bank**

	N	Mean	Std. Deviation
My income level has made me used credit card anytime	62	3.7290	1.16142
My income level has made me used credit card to purchase standard goods within country	62	3.5670	1.18158
My income level has made me used credit card to purchase goods outside the country	62	3.5117	1.34694
My income level has made me to increase on my credit card line	62	3.4288	1.12568
Valid N (listwise)	62		

The total respondents who participated in filling the questionnaire were 62 people. In ascertaining whether income level has made clients to use credit card anytime, this was revealed by a strong mean of 3.7290 and heterogeneity standard deviation of 1.16142. Furthermore the model analyzed whether income level has made clients use credit card to purchase standard goods within country, this was revealed by a strong mean of 3.5670 and heterogeneity standard deviation of 1.18158. In establishing whether income level has made clients use credit card to purchase goods outside the country, strong mean of 3.5117 and heterogeneity standard deviation of 1.34694 was presented. Lastly, on whether income level has made me to increase on my credit card line, strong mean of 3.4288 and heterogeneity standard deviation of 1.12568. Therefore it can be summarized that income level has effect on credit adoption in the bank.

**Table 11.3: Relationship between Level of Income and Adoption of Credit by Clients of I&M Bank**

			Level of Income	Adoption of Credit
Spearman's rho	Level of Income	Correlation Coefficient	1.000	.945**
		Sig. (2-tailed)	.	.000
		N	62	62
	Adoption of Credit	Correlation Coefficient	.945**	1.000
		Sig. (2-tailed)	.000	.
		N	62	62

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Using Spearman's correlation co efficiency model Table 11.3 gives the statistical evidences concerning the relationship between Level of Income and Adoption of Credit by Clients of I &M Bank. According to the results, sample size N is 62 and the significant level is 0.01, the results indicate that fixed pay has positive strong correlation on productivity equal to .945\*\* and the sig is .000 which is less than 0.01. When sig. is less than significant level, researchers conclude that variables are correlated. It is therefore concluded by the researcher that there is a statistically significant correlation between Level of Income and Adoption of Credit by Clients of I&M Bank, implying that when you have high income even the rate of using credit card become high since it promotes cashless society.

**11.2 Effect of Credit Awareness on Adoption of Credit Cards:**

Respondents views on the credit usage knowledge and its influence on the credit card adoption in I&M Bank

**Table 11.4: Credit Card Usage Knowledge in I & M Bank**

	N	Mean	Std. Deviation
The bank sensitize clients on how to use credit card	62	4.3254	.86042
I purchase goods by use of credit card	62	4.2662	.71126
I keep my password confidential	62	4.3102	.49624
I can change my password anytime I want	62	4.0711	.88700
I give my card to be used by another person	62	3.9684	.88952
Valid N (listwise)	62		

The total respondents who participated in filling the questionnaire were 62 people. In ascertaining whether bank sensitize clients on how to use credit card, this was revealed by a strong mean of 4.3254 and heterogeneity standard deviation of

.86042. In analyzing whether clients purchase goods by use of credit card, this was revealed by a strong mean of 4.2662 and heterogeneity standard deviation of .71126. Furthermore researcher wanted to establish whether clients keep their password confidential, this was revealed by a strong mean of 4.3102 and heterogeneity standard deviation of .49624. In establishing whether clients change my password anytime I want, this was revealed by a strong mean of 4.0711 and heterogeneity standard deviation of .88700. Lastly in ascertaining whether clients give their card to be used by another person, this was revealed by a strong mean of 3.9684 and heterogeneity standard deviation of .88952. In summary this means that to a large extent clients are sensitized on how to use credit.

**Table 11.5: Relationship between Credit Card awareness and Credit Card Adoption in I & M Bank**

	N	Mean	Std. Deviation
My Credit Card usage knowledge has made me used credit card anytime	62	4.3536	.97023
My Credit Card usage knowledge has made me used credit card to purchase standard goods within country	62	4.4467	.84482
My Credit Card usage knowledge has made me used credit card to purchase goods outside the country	62	3.3196	1.04615
My Credit Card usage knowledge has made me to increase on my credit card line	62	3.8969	.79225
My Credit Card usage knowledge has made me to change my password frequently for security purpose	62	4.0122	.77133
Valid N (listwise)	62		

The total respondents who participated in filling the questionnaire were 62 people. In testing whether Credit Card usage knowledge made clients used credit card anytime, this was revealed by a strong mean of 4.3536 and heterogeneity standard deviation of .97023. In testing whether Credit Card usage knowledge made clients used credit card to purchase standard goods within country, this was revealed by a strong mean of 4.4467 and heterogeneity standard deviation of .84482. On whether Credit Card usage knowledge made me clients used credit card to purchase goods outside the country, this was revealed by a strong mean of 3.3196 and heterogeneity standard deviation of 1.04615. In ascertaining whether Credit Card usage knowledge has made me to increase on my credit card line, this was revealed by a strong mean of 3.8969 and heterogeneity standard deviation of .79225. Lastly, in analyzing whether Credit Card usage knowledge has made clients to change password frequently for security purpose, this was revealed by a strong mean of 4.0122 and heterogeneity standard deviation of .77133

**Table 11.6: Relationship between Credit Card Usage Knowledge and Credit Card Adoption in I & M Bank**

			Credit Card Usage Knowledge	Credit Card Adoption
Spearman's rho	<b>Credit Card Usage Knowledge</b>	Correlation Coefficient	1.000	.911**
		Sig. (2-tailed)	.	.000
		N	62	62
	<b>Credit Card Adoption</b>	Correlation Coefficient	.911**	1.000
		Sig. (2-tailed)	.000	.
		N	62	62

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Using Spearman's correlation co efficiency model Table 11.6 gives the statistical evidences concerning the relationship between Credit Card Usage Knowledge and Credit Card Adoption by Clients of I & M Bank. According to the results, sample size N is 62 and the significant level is 0.01, the results indicate that fixed pay has positive strong correlation on productivity equal to .911\*\* and the sig is .000 which is less than 0.01. When sig. is less than significant level, researchers conclude that variables are correlated. It is therefore concluded by the researcher that there is a statistically significant correlation between Credit Card Usage Knowledge and Credit Card Adoption by Clients of I&M Bank, implying that when Credit Card Usage Knowledge affects usage affects credit card usage.

**11.3 Influence of Credit Cost on Adoption of Credit Card:**

Respondents views on the Credit Cost on the credit card adoption in I&M Bank

**Table 11.7: Influence of Credit Cost on adoption of Credit Card**

	N	Mean	Std. Deviation
Credit card is cheap and affordable	62	3.8246	1.09814
I can increase my Credit Card line because of cheap cost	62	3.9711	1.16211
Credit card has high cash than transaction fee	62	4.0311	1.07664
I prefer to use credit card than cash	62	4.0652	1.09461
Valid N (listwise)	62		

The total respondents who participated in filling the questionnaire were 62 people. In testing whether Credit card is cheap and affordable, this was revealed by a strong mean of 3.8246 and heterogeneity standard deviation of 1.09814. In testing whether Credit Card line increase is affected by cost, this was revealed by a strong mean of 3.9711 and heterogeneity standard deviation of 1.16211. In ascertaining whether Credit card has high cash than transaction fee, this was revealed by a strong mean of 4.0311 and heterogeneity standard deviation of 1.07664. Lastly, in establishing whether clients I prefer to use credit card than cash, this was revealed by a strong mean of 4.0652 and heterogeneity standard deviation of 1.09461. In summary it be stated that cost is an important factor in credit card usage.

**Table 11.8: Influence of Credit Cost on Adoption of Credit Cards**

	N	Mean	Std. Deviation
Affordable Credit Card Cost has made me used credit card frequently	62	3.6221	.76842
Affordable Credit Card Cost has made me used credit card to purchase goods within the country	62	4.1556	.87109
Affordable Credit Card Cost has made me to purchase goods outside the country	62	3.7146	.95232
Affordable Credit Card Cost has made me to increase on my credit card line	62	4.1151	.89222
Valid N (listwise)	62		

The total respondents who participated in filling the questionnaire were 62 people. In testing whether Affordability of Credit Card Cost has made clients used credit card frequently, this was revealed by a strong mean of 3.6221 and heterogeneity standard deviation of .76842. On whether Affordability of Credit Card Cost has made client used credit card to purchase goods within the country, this was revealed by a strong mean of 4.1556 and heterogeneity standard deviation of .87109. In ascertaining whether Affordable Credit Card Cost has client to purchase goods outside the country, this was revealed by a strong mean of 3.7146 and heterogeneity standard deviation of .95232. Lastly in establishing whether Affordable Credit Card Cost has made me to increase on my credit card line, this was revealed by a strong mean of 4.1151 and heterogeneity standard deviation of .89222. In summary the reveals that Credit Card Cost affects credit card adoption and usage.

**Table 11.9: Relationship between of Credit Cost and Adoption of Credit Card**

			Credit Cost	Adoption of Credit Card
Spearman's rho	Credit Cost	Correlation Coefficient	1.000	.955**
		Sig. (2-tailed)	.	.000
		N	62	62
	Adoption of Credit Card	Correlation Coefficient	.955**	1.000
		Sig. (2-tailed)	.000	.
		N	62	62

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Using Spearman's correlation co efficiency model Table 11.9 gives the statistical evidences concerning the relationship between Credit cost and Credit Card Adoption by Clients of I &M Bank. According to the results, sample size N is 62 and the significant level is 0.01, the results indicate that fixed pay has positive strong correlation on productivity equal to .955\*\* and the sig is .000 which is less than 0.01. When sig. is less than significant level, researchers conclude that variables are correlated. It is therefore concluded by the researcher that there is a statistically significant correlation

between Credit cost and Credit Card Adoption by Clients of I&M Bank, implying that when Credit cost affects usage affects credit card usage and adoption.

## **12. CONCLUSION AND RECOMMENDATIONS**

### **12.1 Conclusions:**

In conclusion it can be stated that there are several factor which affects adoption and usage of credit card but analyzed factors like income level, credit card awareness and credit card cost affects adoption and usage credit cards. These factors affects usage of credit inform of purchasing of goods both within and outside the country. Using Spearman's correlation co efficiency model Table 11.6 gives the statistical evidences concerning the relationship between factors affecting usage of credit card and Adoption/usage of Credit Cards by Clients of I &M Bank. According to the results, sample size N is 62 and the significant level is 0.01, the results indicate that fixed pay has positive strong correlation on productivity more than 90% and the sig is .000 which is less than 0.01. When sig. is less than significant level, researchers conclude that variables are correlated. It is therefore concluded by the researcher that there is a statistically significant correlation between factors affecting usage of credit card and Adoption/usage of Credit Cards by Clients of I&M Bank, implying that they are many factor which affect adoption and usage of Credit Cards.

### **12.2 Recommendations:**

Researcher suggests the following recommendations;

The bank should reduce on credit card cost in order to allow clients acquire much of the cards for their business transaction.

The banks should sensitize the clients on how to use credit card effectively in order to allow the clients use the service worldwide without much problems.

The bank should make sure credit card is a must especially for clients to acquire loans in the banks and this will encourage them in the use of credit card effectively.

## **REFERENCES**

- [1] Akhtar, H. (2010). Perceived Barriers in the adoption & usage of Credit Cards (Vol. 1) Journal of Bank Marketing
- [2] Bridget McCrea, Masters of Survival, Fortune Small Business, December 21, 2002.
- [3] Calem, P. S., & Mester, n. L. (Dec., 1995). Consumer Behavior and the Stickiness of Credit-Card Interest Rates the American Economic Review, 85 (5), 1327-1336.
- [4] Calem, P. S., Gordy, M. B., & Mester, L. J. (2006) Switching Costs and Adverse Selection in the Market for Credit Cards: New Evidence. Journal of Banking and Finance, 1653-1685.
- [5] Chan, R. Y.-K. (1997). Demographic and attitudinal differences between active and inactive credit cardholders - the case of Hong Kong International Journal of Bank Marketing, 15 (4), 117-125
- [6] Chirapanda, S., & Yoopetch, C. (2008). Bank Credit Card Adoption Criteria and Marketing Implications: The Case of Thailand.
- [7] Comprehensive COBOL, vol-I, Fundamentals of COBOL programming,4/e by A.S.Philippakis and Leonard J. Kazmier ; TMH
- [8] Comprehensive COBOL, vol-II, Advanced COBOL programming, 4/e by A.S.Philippakis and Leonard J. Kazmier; TMH
- [9] Delener, N., & Katzenstein, H. (1994). Credit card possession and other payment systems International Journal of Bank Marketing, 12 (4), 13-24
- [10] Ernst and Young (1996) "Survey of retail payment systems," Chain Store Age, January.
- [11] European Commission (2002) "Case no. comp/29.373 - Visa International - multilateral Interchange fee," Official Journal of the European Communities, 2002/L318/17, November 22.

- [12] Evans, D.S. and R.L. Schmalensee (1999) *Paying with Plastic: The Digital Revolution in Buying and Borrowing*, Cambridge, MA: The MIT Press.
- [13] Gans, J.S. and S.P. King (2002a) "A theoretical analysis of credit card regulation," mimeo, University of Melbourne, September.
- [14] Kitch, E.W. (1990) "The framing hypothesis: is it supported by credit card issuer opposition to a surcharge on a cash price," *Journal of Law, Economics, and Organization*, 6: 217-233.
- [15] Lobell, C.D. and J.W. Gelb (1981) "The cash discount act," *New York Law Journal*, (December): 1-4.
- [16] Mandell, L. (1990) *the Credit Card Industry*, Boston, MA: Twayne Publishers.
- [17] Mugenda, O. M. & Mugenda, A. G. (1999). *Research Methods: Quantitative and Qualitative Approaches*. Nairobi: Acts Press.
- [18] National Bank of Rwanda, payment System Department, 2015
- [19] Reserve Bank of Australia (2001) *Reform of Credit Card Schemes in Australia I: A Consultation Document*, Sydney, Australia: Reserve Bank of Australia.
- [20] Saville, P. and Wilson, E. (1991) The reliability and validity of normative and ipsative approaches in the measurement of personality. *Journal of Occupational Psychology*, 64:219–238.
- [21] Schwartz, M. and D.R. Vincent (2002) "Same price, cash or card: vertical control by payments networks," Georgetown University Working Paper, 09-01.
- [22] *Techniques*. London and Philadelphia: Falmer Press.
- [23] Tornatzky, L.G. and Klein, K.J. (1982), "Innovation characteristics and innovation adoption implementation: a meta-analysis of findings", *IEEE Transactions on Engineering Management*, Vol. 29, pp. 28-45
- [24] Triandis, H.C. (1971). *Attitude and Attitude Change*. John Wiley, New York.
- [25] Triandis, H.C. (1980). *Values, Attitudes and Interpersonal Behaviour*. In *Nebraska Symposium on Motivation, 1979: Beliefs, Attitudes and Values*, H.E. Howe (Ed.), University of Nebraska Press, Lincoln, NE, pp.195-259.
- [26] Turban, E., Lee, J., King, D., and Chung, H.M. (2000) *Electronic Commerce: A managerial perspective*, Prentice Hall International Inc.
- [27] Venkatesh, V. (1999). "Creation of Favorable Perceptions: Exploring the Role of Intrinsic Motivation", *MIS Quarterly*, Vol.23, No. 2, pp.239-260.
- [28] Venkatesh, V. and Brown, S.A. (2001). "A Longitudinal Investigation of Personal Computers in Homes: Adoption Determinants and Emerging Challenges", *MIS Quarterly*, Vol. 25, No. 1, pp.71-102
- [29] Verma, G.K. & Mallick, K. (1999). *Researching Education: Perspectives and* Weiner, I. B. and Greene, R. L. (2008). *Handbook of Personality Assessment*. JohnWiley and Sons, Inc., Hoboken, New Jersey.
- [30] Wright, J. (2003b) "Pricing in debit and credit card schemes," *Economics Letters*, forthcoming.
- [31] *IOSR Journal of Business and Management (IOSRJBM) ISSN: 2278-487X Volume2, Issue 3(July-Aug. 2012), PP 14-23*