A STUDY ON PREDICTING THE USAGE OF DEBIT CARDS IN THE RURAL AREAS OF VELLORE DISTRICT

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ABSTRACT

The growth in the banking sector of India can be realized with the high usage of banks and its services by the rural customers. Advent of technology such as ATMs, debit cards and credit cards has contributed to the growth of banks in urban areas unlike rural areas. Many factors attribute to the acceptance of new technology by the rural customers. This paper aims at understanding the attitude of the rural customer towards the acceptance of ATM technology and predicts the long term usage of debit cards. From the previous research studies on Technology Acceptance Model (TAM), it depicts how the technology of using ATMs can be accepted in the minds of rural people. Adopting the Technology Acceptance Model (TAM) the paper has given a brief frame of factors leading to the usage of ATMs and debits cards. A questionnaire has been circulated targeting 170 rural customers of banks in the nearby rural districts of Vellore. Factor analysis and a reliability analysis have been drawn to identify the validation of the research study.

Key words : **Usage of debit cards, Technology Acceptance Model, Rural consumers**

INTRODUCTION

The Banking in India, originated in the last decades of the 18th century. The first bank in India was started in 1789, "The General Bank of India" and Bank of Hindustan, which started in 1790. The oldest bank in existence in

India is the State Bank of India, which originated in the Bank of Calcutta in June 1806, established under British East India Company. Post independence the bank was merged as "The state bank of India". The growth in the Global Trade and Business, and high demand on imports and exports of Indian commodities has gained large flow of money in the Indian markets. Consequently the competition in the market amplified the increase of money transaction.

The IT revolution had a great impact in the Indian banking system. The use of computers had led to introduction of online banking in India. The use of the modern innovation and computerisation of the banking sector of India has increased many folds after the economic liberalisation of 1991 as the country's banking sector has been exposed to the world's market. The Indian banks were finding it difficult to compete with the international banks in terms of the customer service without the use of the information technology and computers. The use of internet through the telephone cable wires has made the transactions very easy. In order to increase the purchasing power of the customers the banks first initiated the credit cards for the customers in 1985. The Credit cards have been very useful to the customers in purchasing a product on credit in any retail outlet. Customers can buy the product at any time and they should pay the cost of the product within 6 months of the date of the purchase. This card though was very useful to the customers; it failed in the later part of its success. This has made the customers to increase their debt in huge amounts. After which the banks imposed a credit limit of Rs 25000 for each credit card holder. The saturation level of credit cards was reached by 1999. After which the banks have initiated a new technology of withdrawing money in an ATM outlet. Hence the concept of debit cards was introduced by the banks. The main aim of debit cards was to withdraw money for every 24 hours in 365 days. This has made the customer groups to feel very much comfortable with the money withdrawal terms.

Debit cards can be used only in ATM machines so far. The main use of debit cards was money withdrawal and it cannot be used as a credit card. Debit cards have a direct access to our bank account which helps in money withdrawal from our savings. Any customer will have to withdraw money with respect to his savings in the bank account. The excess of money cannot

be withdrawn above the amount in his account. Initially, the idea of debit cards was failure due to the lack of availability of ATM machines. Using ATM cards have also reduced the customers' visits to the bank; this was welcomed by the bank authorities since the human efforts can be reduced. So many banks started to install their branch ATM machines in the nearest locality of the customer. Location of ATMs enabled the comfort ability of the customers and increased the frequency of using debit cards and ATMs. The use of debit cards was limited to Rs 25000 per day and also levied with a bank service charge of Rs 20 per transaction, in case of non bank branch ATM debit cards.

The location of ATMs had some criteria such as, installation of the machine should be done in a minimum population of 500 members and expected usage of ATM machines should be minimum of 50 per day. A road distance of 20 kilometres between every bank branch ATM should be maintained. An expected cost of installation of ATM machine is expected to be Rs 1, 00,000. In case of location of ATMs in high ways, it should be located for every 50 kilometres in commercial outlets such as petrol bunks and restaurants. Location of ATMs in rural areas can be located for every 20 kilometres. For every 3 Villages 2 ATMs are installed in a distance of 20 kilometres.

Presently due to the increased demand and use of ATMs banks such as ICICI, State Bank of Indian and SBI have started to increase the number of ATMs in rural areas throughout India. The technology may be new to them to adopt but an awareness program when provided to the rural customers, will enable them to make use of debit cards. Now days in urban areas debit cards are used as point of payment method in any retail outlets and shopping gadgets in online. Automated Teller Machines (ATMs) have gained prominence as a delivery channel for banking transactions in India. Banks have been deploying ATMs to increase their reach. As at the end of December 2007, the number of ATMs deployed in India was 32,342.

From first day of April 2009, entire ATM network is now available to customers from any bank for transactions for no fee at all, irrespective of the

banks in which they have their accounts, Now Customers will not be levied any fee on cash withdrawals using ATM and debit cards issued by other banks. This will in turn increase usage of ATMs in India. More people are now moving towards using the automated teller machines (ATM) for their banking needs. According to a survey by Bank net India, 95% people now prefer this modern channel to traditional mode of banking. Almost 60% people use an ATM at least once a week. Many ATM vendors have devised specialised machines, embedded with biometric devices for authentication. Catering to the rural population, these machines have enabled them to interact with the machine in their local language and on a graphical user interface. The rural customer has seemed to accept this new medium. This has the potential to further widen the scope of ATM usage in the interior parts of the country. Wide acceptance of ATMs by consumers, introduction of biometric ATMs, and increasing scope of value-added ATM services will maintain growth in the industry.

LITERATURE REVIEW

Technology is immense and every day we are comforted with new technology. The factor of change in the mind set of any individual to adopt a technology is the greatest challenge for the invention. Most of the people can control their behavioral intention   and present a rational behavior. Fishbein and Ajzen (1975) indicate that intention is an immediate determinant factor influencing people to adopt a certain action and can be used to investigate consumers' adoption of certain products and services. The technology acceptance model (TAM) considers consumers' motivation towards the acceptance of new technology productions. It proposes that beliefs about usefulness and ease-of-use of a new system are essential factors in determining a user's attitude to the acceptance of technology.

Previous studies have been empirically verified by TAM, and some of them recognize the need to adjust the model for different contexts (Karahanna) . There are some significant factors added to TAM such as system quality, social influence, etc. An unstable system could not convince

consumers to accept definitely. Thus, some studies adopt system quality as a factor that influences the acceptance of new technological productions (Venkatesh and Davis, 2000). In addition, social influence is executed by relevant others in a consumer's environment. Previous studies about electronic commerce and e-mail reveal that social influence has a direct and positive effect on behavioral intention (Karahanna).

The perceived risk often is another significant factor for consumers to use payment services. When prevalently adopted, electronic cash stored-value cards might be threatened by fraud risk, operational risk, technology risk, etc. These risks en- danger the operating system and could lead to bank runs and even make the whole payment system to break down (McAndrew, 1997).Consumers' first priority is the security of a payment system.

Several prior studies of rural consumers have investigated demographic patterns in the adoption of payment methods. Using various versions of the Survey of Consumer Finances (SCF), Kennickell and Kwast , Stavins (1998) and Zinman (2005) find similar results: Newer technologies such as electronic banking and bill payment or debit cards are used most frequently by younger, businessmen, better-educated individuals. Income appears to be non-linearly related to debit card use in these studies, with the probability of use rising with income at first and then declining among the wealthiest households.

The studies of Pippow and Schoder (2001) and Shy and Tarkka (2002) compare a variety of costs such as fees, time cost, interest cost among different payment instruments, and reach a common conclusion that electronic cash stored-value cards can partly substitute for cash in small retail transactions. M'Chirgui (2006) indicates that the acceptance of electronic cash depends on the value of the transaction, and if the cost per transaction is high, merchants possess less incentive to accept electronic cash as a payment instrument.

Working from the empirical results in Kennickell and Kwast (1997),. Using the 2001 SCF, he considers whether consumers use debit cards as a method of behavioural restraint, and finds evidence that the majority of debit card users appear to have pecuniary rather than behavioral motives for their choice of payment; using different methods, our findings corroborate his. Evidence on consumer response to deferential pricing of payment methods is extremely scarce.

NEED FOR THE STUDY

This study is done to understand the attitude of the rural consumer towards the acceptance of ATM technology and predicts the long term usage of debit cards and to know the scope of debit cards in the future which will help the banks for their growth and development

OBJECTIVES

1. To study the factors that influence the adoption of debit cards among banking customers
2. To identify consumers attitude towards debit cards
3. To assess the potential for usage of debit cards among banking customers in Vellore

RESEARCH METHODOLOGY

Research design

Quantitative research methodology has been used for this study. This study is totally based on the quantitative information. It is more focused on the collection and analysis of numerical and statistical data.

Sample

Sampling technique used here is Quota sampling where the population is first segmented into mutually exclusive sub-groups, just as in stratified sampling. Then judgment is used to select the subjects or units from each segment based on a specified proportion

Sample size: 173

Data collection

1. Primary sources

   Questionnaires

2. Secondary sources
   - Published Journals
   - Research articles
   - Websites

DATA ANALYSIS

VARIABLES WITH PERCENTAGE ANALYSIS

Age of the respondent

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 25	39	22.5	22.9	22.9
	26-35	50	28.9	29.4	52.4
	36-45	50	28.9	29.4	81.8
	46-60	26	15.0	15.3	97.1
	above 60	5	2.9	2.9	100.0
	Total	170	98.3	100.0	
Missing	System	3	1.7		
Total		173	100.0		

Age of the respondent

Occupation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Own business	24	13.9	14.1	14.1
	professional	33	19.1	19.4	33.5
	Agriculture	15	8.7	8.8	42.4
	govt employee	30	17.3	17.6	60.0
	private firm employee	32	18.5	18.8	78.8
	Retired	6	3.5	3.5	82.4
	Student	24	13.9	14.1	96.5
	Housewife	4	2.3	2.4	98.8
	Others	2	1.2	1.2	100.0
	Total	170	98.3	100.0	
Missing	System	3	1.7		

Occupation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Own business	24	13.9	14.1	14.1
	professional	33	19.1	19.4	33.5
	Agriculture	15	8.7	8.8	42.4
	govt employee	30	17.3	17.6	60.0
	private firm employee	32	18.5	18.8	78.8
	Retired	6	3.5	3.5	82.4
	Student	24	13.9	14.1	96.5
	Housewife	4	2.3	2.4	98.8
	Others	2	1.2	1.2	100.0
	Total	170	98.3	100.0	
Missing	System	3	1.7		
Total		173	100.0		

Occupation

Years of association with the bank

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than a year	9	5.2	5.3	5.3
	1 - 3 years	26	15.0	15.3	20.6
	above 3 years	134	77.5	78.8	99.4
	4	1	.6	.6	100.0
	Total	170	98.3	100.0	
Missing	System	3	1.7		
Total		173	100.0		

Years of association with the bank

Years of association with the bank
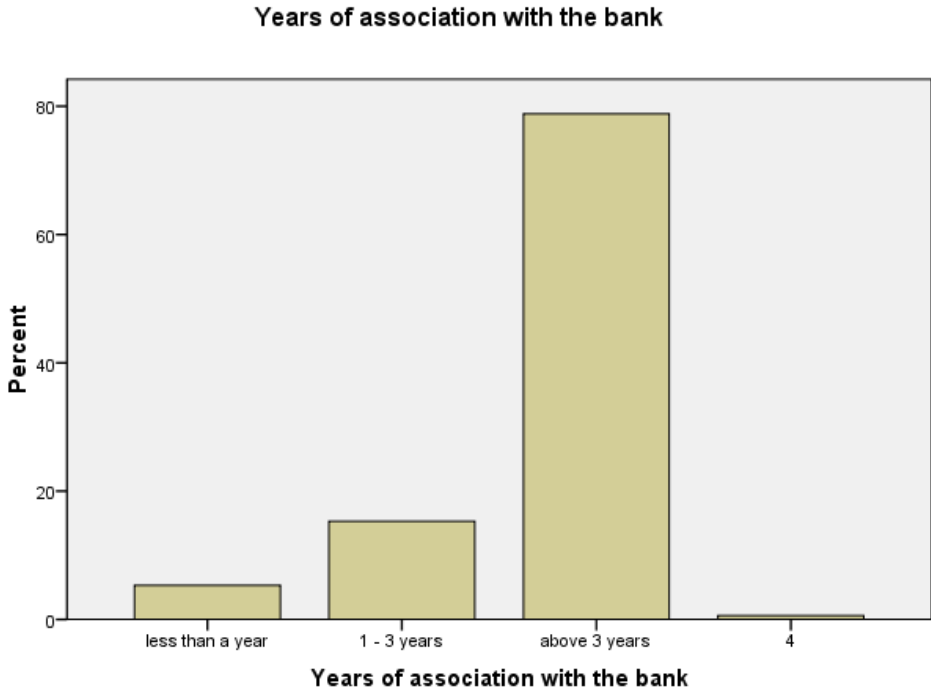
Monthly household income

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 5000	18	10.4	10.6	10.6
	5000 -10000	13	7.5	7.6	18.2
	11000 - 20000	7	4.0	4.1	22.4
	21000 - 30000	46	26.6	27.1	49.4
	31000 - 40000	53	30.6	31.2	80.6
	more than 40000	33	19.1	19.4	100.0
	Total	170	98.3	100.0	
Missing	System	3	1.7		
Total		173	100.0		

Monthly household income

Monthly household income
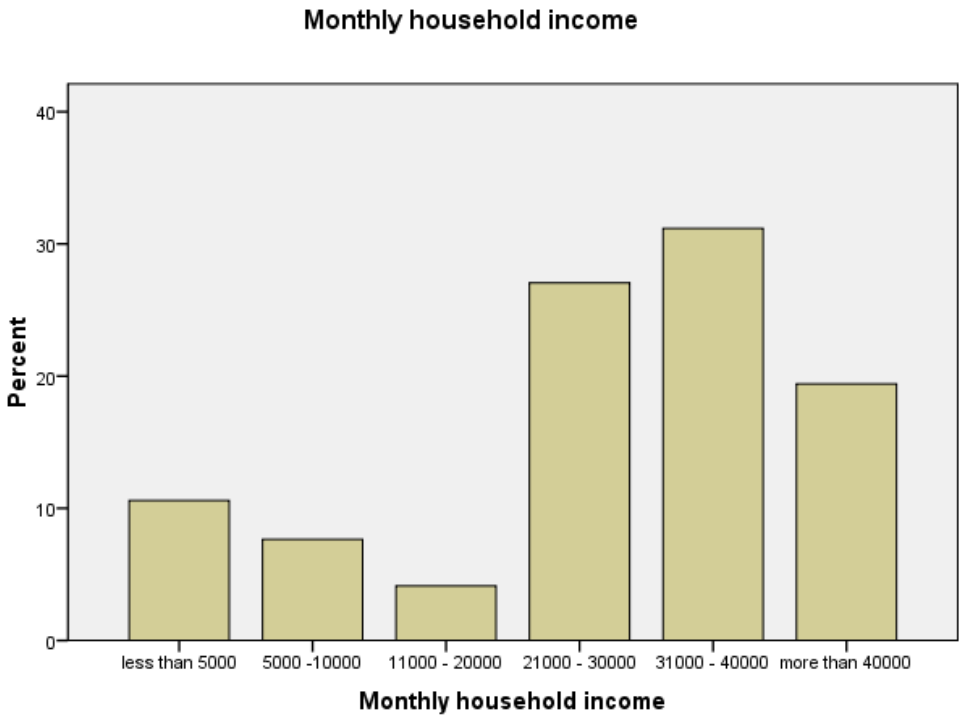
Highest education level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	postgraduate	106	61.3	62.4	62.4
	undergraduate	47	27.2	27.6	90.0
	PUC	6	3.5	3.5	93.5
	SSLC	9	5.2	5.3	98.8
	Schooling	2	1.2	1.2	100.0
	Total	170	98.3	100.0	
Missing	System	3	1.7		
Total		173	100.0		
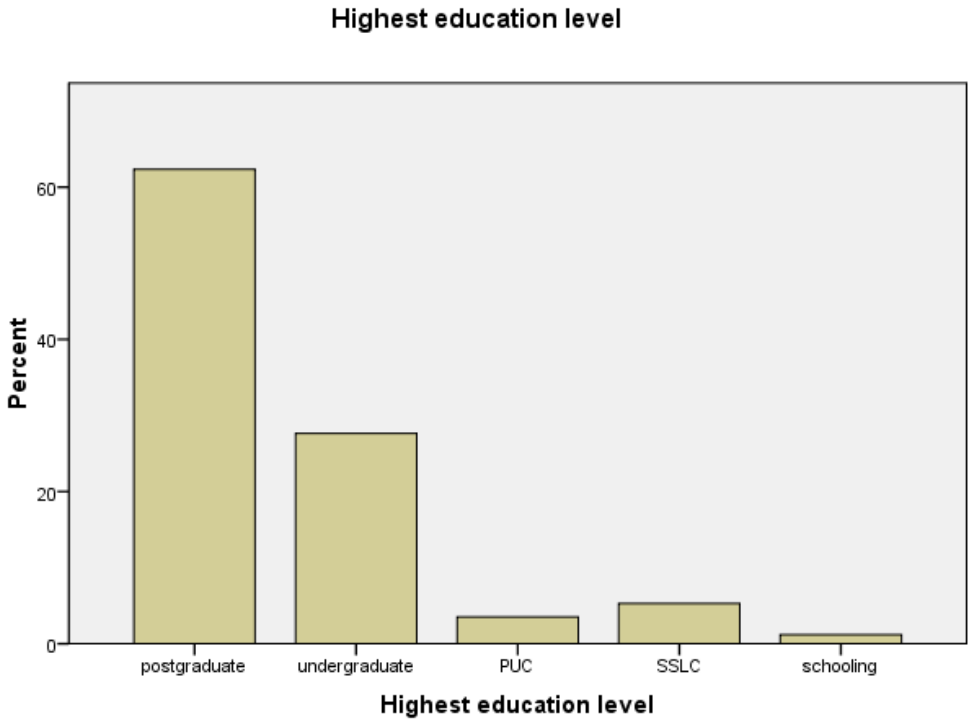
Highest education level

Highest education level

Number of years using debit cards

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than a year	15	8.7	8.8	8.8
	1 - 3 years	30	17.3	17.6	26.5
	above 3 years	125	72.3	73.5	100.0
	Total	170	98.3	100.0	
Missing	System	3	1.7		
Total		173	100.0		
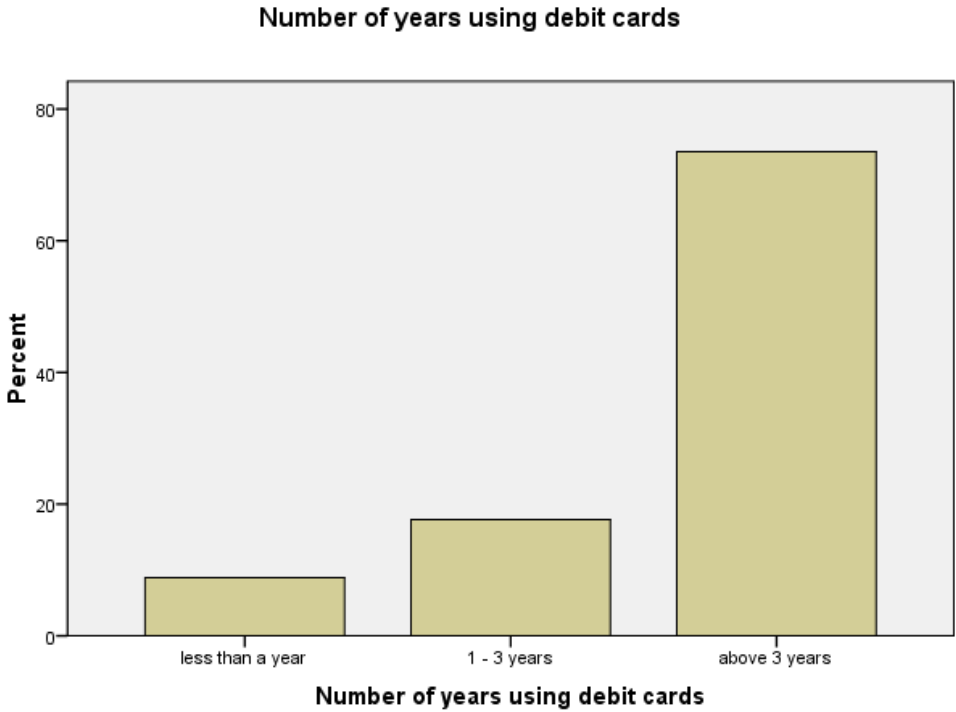
Number of years using debit cards

Number of years using debit cards

Reason for not using debit cards

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Afraid that card may be stolen	1	.6	.6	.6
	i use debit card	169	97.7	99.4	100.0
	Total	170	98.3	100.0	
Missing	System	3	1.7		
Total		173	100.0		
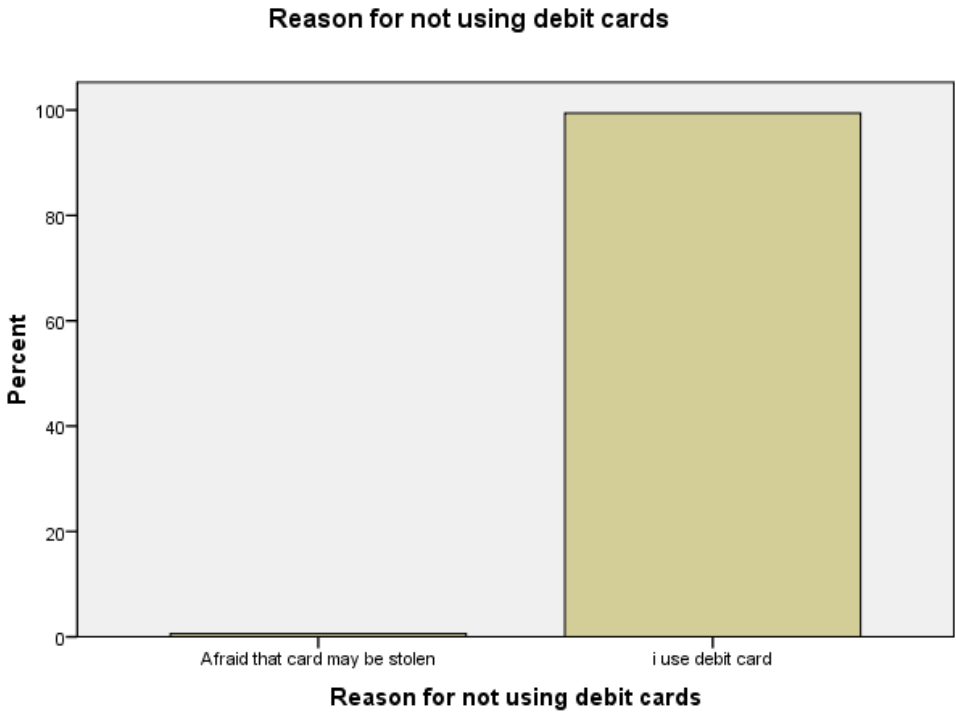
Reason for not using debit cards

Frequency of using debit cards

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	once in 3 days	37	21.4	21.8	21.8
	once in a week	44	25.4	25.9	47.6
	once in two days	58	33.5	34.1	81.8
	once in a month	31	17.9	18.2	100.0
	Total	170	98.3	100.0	
Missing	System	3	1.7		
Total		173	100.0		

Frequency of using debit cards
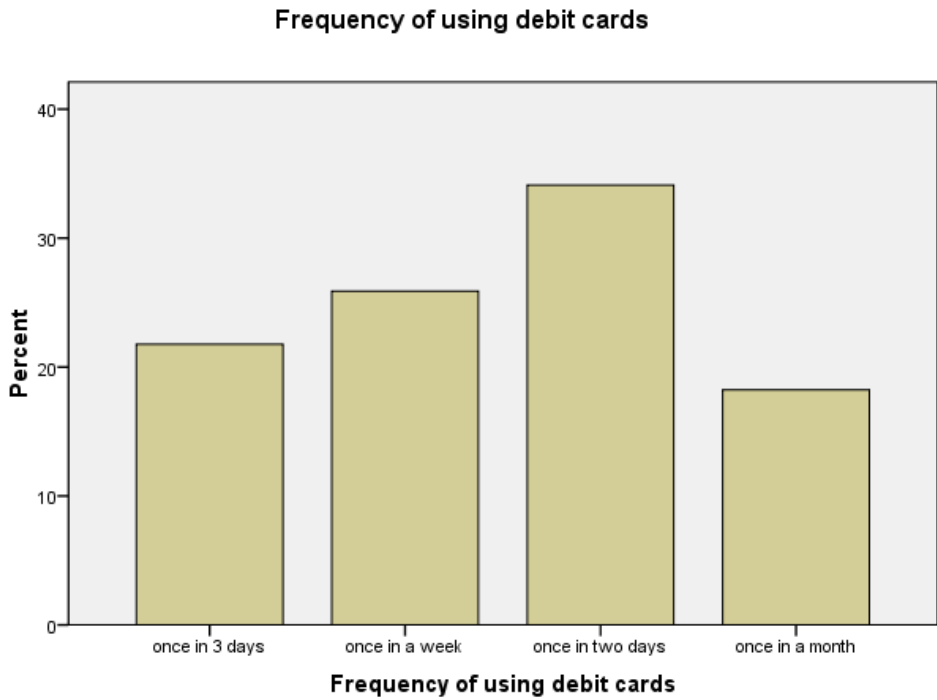
usage of debit cards in POP

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	170	98.3	100.0	100.0
Missing	System	3	1.7		
Total		173	100.0		
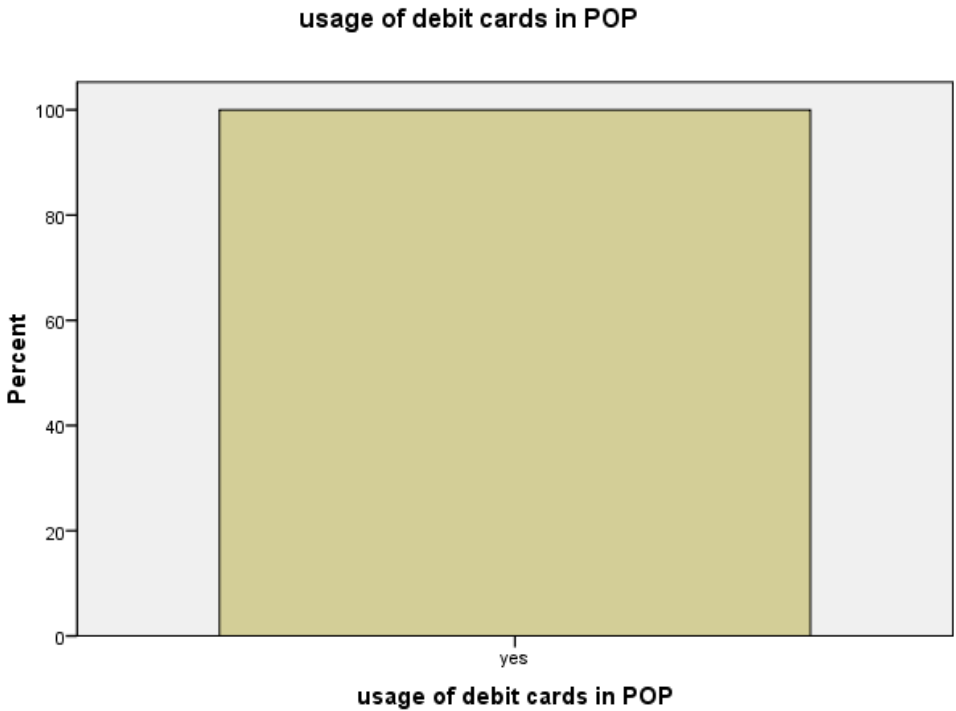
usage of debit cards in POP

usage of debit cards in POP

Frequency of using debit cards in POP

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	once in a week	14	8.1	8.2	8.2
	once in a week	37	21.4	21.8	30.0
	once in two weeks	80	46.2	47.1	77.1
	once in a month	39	22.5	22.9	100.0
	Total	170	98.3	100.0	
Missing	System	3	1.7		
Total		173	100.0		

Frequency of using debit cards in POP
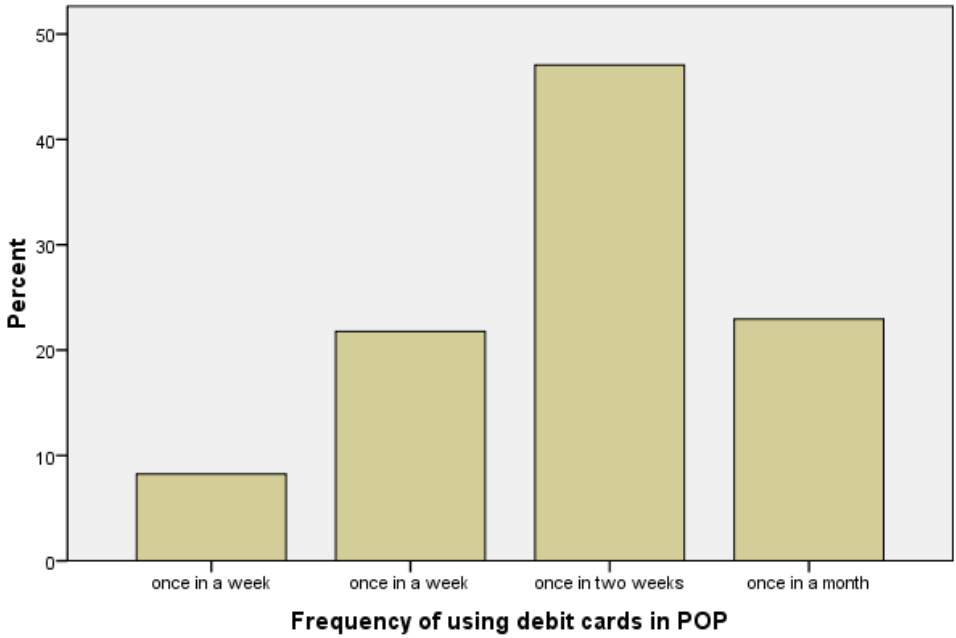
Monthly transaction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<5000	85	49.1	50.0	50.0
	5000-1000	60	34.7	35.3	85.3
	10000 and above	23	13.3	13.5	98.8
	4	2	1.2	1.2	100.0
	Total	170	98.3	100.0	
Missing	System	3	1.7		
Total		173	100.0		

Monthly transaction
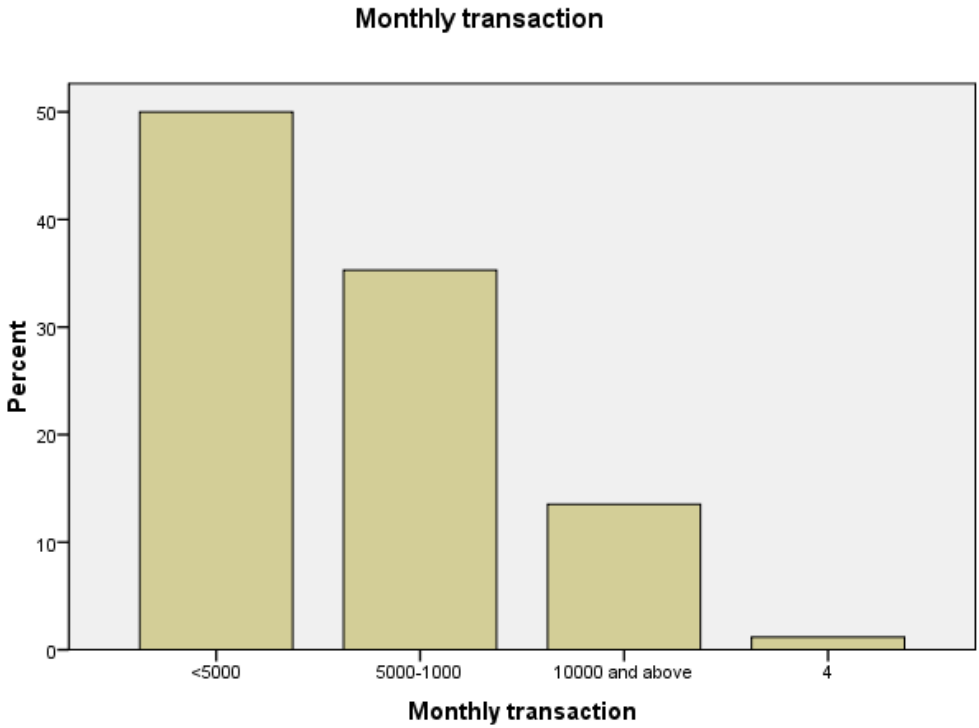
FACTOR ANALYSIS

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.682
Bartlett's Test of Sphericity	Approx. Chi-Square	281.676
	Df	91
	Sig.	.000

Rotated Component Matrix[a]

	Component			
	1	2	3	4
only educated people can use debit cards	.688			-.357
Inclusion of local language	.679			
assistance in guiding ATM transactions	.616			
ATMs in near by places	.580			
Organise awareness programs by banks	.526			
Debit card helps easy transaction		.643		
Helps faster transaction		.619		
Debit card accepting places contribute more usage		.580		
ATM withdrawal easy than bank withdrawal		.567		
enables secured transactions		.449		
Service charges is acceptable			.774	
withdrawal limits to be increased			.567	.492
Convenient for POP payments			.510	
convenience in owning debit card				.723

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Convenient for POP payments			.510	
convenience in owning debit card				.723

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Rotated Component Matrix[a]

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	1	2	3	4
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Convenient for POP payments			.510	
convenience in owning debit card				.723

a. Rotation converged in 7 iterations.

Reliability

Scale: value added services by banks

Cronbach's Alpha	N of Items
.892	5

Scale: Easy, faster and secured transactions

Reliability Statistics

Cronbach's Alpha	N of Items
.833	5

Scale: customer expectations

Reliability Statistics

Cronbach's Alpha	N of Items
.854	3

Conclusion

From this study, it is found that the technology may be new to them to adopt but an awareness program when provided to the rural customers, will enable them to make use of debit cards. The rural customers feel that the debit cards usage should be more secured. The study implies that customer expect more installation of ATM machines so that to make the transactions reliable.

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