
Demographic Differences & Shopping Behavior of Indian Middle Income Group Users of Debit Cards : An Emprical Analysis

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Abstract

With the advancement of technology and need towards better service provision, plastic money in form of debit or credit cards is becoming common now-a-days. These tools of purchase management are reaching into wallet of nearly all. As a result, companies are also eying to leverage card benefits as the shopping / purchase facilitator. As with the emerging equality of men and women and their role in shaping the society, both genders establish quite active response patterns with respect to debit/credit card spending and use. According to the survey of Reserve Bank of India (RBI) in 2011, card holders have consolidated spending with a single and have reduced the use of multiple cards. In India, the proportion of single card holders had grown the most in 2011 at the 90 per cent while the card use grew at the 84 per cent, followed by Malaysia (80 per cent). The use of cards is perceived differently by various consumer classes. Women might be bigger spenders than men, but according to the survey by RBI (2011) , they use their debit cards less frequently. The present study explores various behavioural aspects of use of debit cards among broad consumer classes such as Men and Women belonging to middle income group of tier II cities.

Key Words: *Service Provision, Purchase Facilitator, Middle Income Group, Tier II Cities*

Introduction

Shopping is now an integral activity of today's individual. As the market has been developing through various avenues- merchandise stores, hyper and supermarkets, shopping Malls and emergence of e shopping destinations, the concept of shopping as a necessary activity have been replaced with the concept of enjoyment. Today's generation is becoming more and more consumer oriented as compared to the older concept of saving orientation of Indian people. Marketers are always offerings facilities in order to stimulate the purchase process and change the purchase orientation ranging from opening outlets near population, heavy sales

promotion, customised service and products offerings and so on. One such major development is the development of plastic money- Debit cards. A debit card provides electronic access to one's

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financial accounts any time and with much ease and convenience. The use of cash limits the purchase depending on the availability of cash in the wallet at a particular moment of any purchase. The emergence of cards removes this barrier of cash balance at any time of shopping and offers more access to cash in electronic formats and thus purchase opportunities and shopping intentions. Here, Debit cards came into existence as a suitable option to shoppers. Various other tools to lure the buyers further for shopping were also introduced viz. credit card offering cash affordability even if actual cash balance is less or negative at a certain point.

Statistics released by the Reserve Bank of India (RBI) in Jan 2012, shows a clear shift in the use of plastic money. Indians, especially those who are not big spenders, are increasingly using debit cards. Data show that the number of debit cards issued by banks was ten times higher than credit cards. Over the past five years, debit card usage both in terms of number of transactions and growth in value have outstripped credit card spending by a huge margin. According to new research report, "Indian Payment Card Market Forecast to 2012", the number of payment cards, categorized as credit and debit cards, is increasing rapidly in India. The research found that the credit card market have been showing tremendous growth in performance and emerged as a potential investment area for players of credit market. According to data of capital Mind (2011), India has witnessed rapid and significant growth in terms of number and volume of credit and Debit cards over a period of time.

Data Analysis furnished by RBI shows increasing trend towards the use of debit card which can be attributed to various factors viz. Consumer demographics, lifestyle orientation of consumers, market development. Banks in order to make use of all these factors, also liberalised provisions for getting a debit card as a value added service to their customers and hence facilitating sales through cards by increasing Swapping Machines and ATM installations at multiple market places.

The present study attempts to understand various variables / factors that influence the choice of the use of cards- credit and debit cards taking into consideration two prominent demographic factors-

such as among gender and rising Middle Income Group.

LITERATURE REVIEW

The usage of any product is determined by various factors. Personality variables are one prominent factor in choice, selection and usage behaviour of a product/service. In recent years, several changes in market have happened with emergence of new / products and emerging role of women in personal and social decision making. Better education penetration, changing social orientation, rise of working and independent female segment has allowed women to be more independent in their decision making on purchase ranging from low investment product to expensive purchases. As a result, it is imperative to understand purchase behaviour individually towards different product categories. Philip Kotler mentioned-"if you want to influence your customer, you will have to understand your customer first".

Several studies have been carried out at various parts of globe to understand the influence of demographic characteristics on purchase decisions. It is also crucial in understanding the buyer's choice of the payment modes. Today, there are various payment options available to shoppers such as – cash, credit card, debit card, shopping cards. Plastic money is increasingly replacing cash as the payment option at the Point of Sale (POS). But the use of these modern payment tools is highly subjective.

Kennickell and Kwast (1997), Stavins (2001) and Zinman (2005) find that newer technologies such as electronic banking and bill payment or debit cards are used most frequently by the younger and better-educated individual. Carow and Staten (1999) specifically examine debit card use early in its diffusion, while Rysman (2004) focuses on the role of demographics in consumers' choice of credit card brands; Hayashi and Klee (2003) examine consumer adoption of debit cards as well as direct deposits and electronic bill payments. Also, Jonker (2005) and Loix, Pepermans and Van Hove (2005) also analyze adoption process of payment methods.

Using cash is convenient because it is accepted almost everywhere (with the notable exception of

online retailers), but carrying large amounts of cash entails both a substantial opportunity cost and a physical risk of being the target of crime. Credit cards, while costly from the perspective of payees (as noted above), offer consumers many advantages. A substantial period of float, limited liability in the case of theft or loss, dispute resolution assistance, consolidation of bill payment, itemized bills, and the ability to borrow are just some of the standard features of most bank issued debit cards. These cards are accepted at the same locations where credit cards are accepted. The major advantages of the debit card are that it normally doubles as an ATM card, thus allowing the consumer to carry one less card, and it also allows the user to receive cash back after purchases are made when used in combination with a personal identification number.

Like credit cards, debit cards also offer consolidated billing/record keeping and ease of telephone and Internet based transactions. Drawbacks to the debit card include limited acceptance and the loss of all float in the case of online debits and most float in the case of offline debits. One branch of research has focused on the demographic characteristics of consumers who choose to use electronic rather than more traditional methods of payment. Mantel (2000) finds that use of electronic payments in general is positively related to income, wealth, and age. Kennickell and Kwast (1997) show that those who use debit cards are younger and have higher levels of education. There are some key differences in the findings of Mantel (2000) and those of Kennickell and Kwast (1997). For example, Mantel's (2000) result differs from that of Kennickell and Kwast (1997). Mantel (2000) argues that the education variable in his results was insignificant because of the inclusion of other demographic variables that are closely related to the level of education. On the other hand, if one considers only debit cards, as in Kennickell and Kwast (1997), the use of cards is more in use among younger people since they tend to adopt new technology more quickly than older people.

Caskey and Sellon (1994) found that consumers do see debit cards as substitutes for cash and cheques, implying that small enticements could convince consumers to choose debit cards over paper money. They argue that 30% growth in debit card usage between 1990 and 1993 was possible because of

(1) the integration of the ATM networks that allow for the transfer of funds and (2) the introduction of the VISA and MasterCard debit programs. They predicted that communication networks improved because of changes in technology and its adaptation in the banking industry. Indeed, between 1993 and 1997 debit card usage grew at an average annual rate of 53.3% while credit card usage grew at an annual rate of only 7.8% during the same time period (Weiner, 1999). This rapid increase in debit card usage has been attributed to consumers substituting debit for cash and cheques for purchases. It is clear why consumers might not see debit cards as a substitute for credit cards (borrowing capacity), but aren't credit cards a very close substitute for debit cards? If this were the case, consumers should have already switched from cash and cheques to credit cards and we shouldn't see such rapid growth in the use of debit cards. Studies have found that demographic attributes are important determinants of consumer payment adoption (Stavins 2001, Mester 2003, Bertaut and Haliassos 2006, Klee 2006, Zinman (2009). However, demographic characteristics leave a substantial variation in payment behaviour unexplained. The present study is an attempt to further the understanding the perception of Young Middle Income Group Indian Consumers towards the use of debit cards and tries to investigate whether Demographic characteristics orient the selection of this payment methods.

RESEARCH METHODOLOGY

This study is conducted on the basis of Primary and Secondary data. Primary data are collected through Structured Questionnaire. Secondary data are collected by exploring official financial data from RBI and other banking portals. The sample size of the research is 50 respondents which consist of different age, income and occupation.

The research tool used for analysis:

1. factor Analysis
2. Mean standard deviation Analysis
3. ANOVA-Table

RELIABILITY TEST

The value of cronbach alpha is 0.842 which shows the significant reliability status. The complete set of interdependent relationship is examined by using factor analysis tool. A varimax rotation measure is used as it is possible to identify each variable with a single factor loading. The value of extraction sum of squared loading is 81.414 which limit the factors no. to 7. This extraction method reduces overlapping and makes the study more focused. Certain factors of debit card users which can influence a prospective buyer or user towards the use of the same are identified. Further, these were common factors identified in past studies leading to diffusion of this tool of payment in market.

Factors affecting Diffusion

- Ease of use against traditional payment methods
- Convenience in payment
- Time saving in transaction (retail payments)
- Safety in transaction

Factors to assess role on individual's life

- Use is related to availability of outlets accepting cards as payment tool
- Carrying Card is used as status symbol
- Card is integrated into their lives as cell phones
- Confidence and Reliability factors associated with card shopping

Table 1: factors affecting diffusion & access to Cards

Gender	easy to use		fear of loss	Convenience	Time saving	Safety in	Status	Availability	Part of life	Confidence	Reliability
	Mean	3	2.9444	3.2222	3.2222	3.5556	3.0556	2.9444	3.0556	3.5	3.4444
MALE	N	18	18	18	18	18	18	18	18	18	18
	SD	1.32842	1.16175	1.55509	1.55509	1.43243	0.8726	1.16175	1.55193	1.42457	1.38148
	Mean	2.8125	3.4063	3	3.1875	2.75	2.8438	3.0938	2.875	3	2.625
Female	N	32	32	32	32	32	32	32	32	32	32
	SD	1.55413	1.13192	1.524	1.57475	1.48106	1.46154	1.05828	1.38541	1.43684	1.15703
	Mean	2.88	3.24	3.08	3.2	3.04	2.92	3.04	2.94	3.18	2.92
Total	N	50	50	50	50	50	50	50	50	50	50
	SD	1.4658	1.15281	1.52315	1.55183	1.49775	1.2752	1.08722	1.42442	1.43839	1.2911

To further understand Gender differences in debit card use behavior, some factors were taken into consideration which has potential to restrict the use of card for multipurpose. The factors are-

- Card purchase leads many times to over purchases

- Use is restricted since availability of use infrastructure is not similar across all markets and geographical areas
- It acts as facilitator for e-shopping
- Limited potential use of card because of awareness about other features and
- Fear factor associated with card shopping.

Table 2: Factors related to restricting multiple use of Cards

Gender		Over Purchase	Selective Outlet	Facilitator	Good Feeling	Awareness	Fear of Frauds
MALE	Mean	2.6667	3.3333	3.8889	3.0000	2.3333	3.1111
	N	18	18	18	18	18	18
	SD	.90749	1.32842	1.13183	1.23669	1.53393	1.32349
FEMALE	Mean	2.3125	2.7813	2.7188	2.6563	2.9667	3.1000
	N	32	32	32	32	30	30
	SD	1.11984	1.06965	1.44209	1.28539	1.58622	1.02889
Total	Mean	2.4400	2.9800	3.1400	2.7800	2.7292	3.1042
	N	50	50	50	50	48	48
	SD	1.05289	1.18649	1.44293	1.26636	1.58100	1.13437

The result shows an equal variation values in respect of over purchase of cards whereas male shows high relation with the choice of outlet and high preference for using debit cards as a facilitator for e-shopping with a feeling of goodness.

The female attitude towards all factors is uniformly distributed except they have fear of fraud with high mean value of 3.1042 showing lack of confidence in using debit cards. Reliability is much less in female as compare to male behaviour related to use of debit cards.

ANNOVA is used to identify significance of Demographic profiles (age, income and profession) of individuals. Data are analyzed converting them in to various factors .The f-value and their relative significance are generated. The dimension of Age, Income and Profession are considered and relationship

is developed with various factors. The results of analysis are as follows:

**There is a significant relationship of age parameter with availability factor.
There is a significant relationship of the choice of outlet with the various income groups.**

The business professionals use the withdrawal facility more as one of the use of debit cards

The detailed analysis is done by using relative mean and standard deviation values. The below table shows the result which measures the value of demographic profile with significant factor mean values.

Table 3 : ANNOVA AND Mean tables

Factors	Age		Income		Profession	
	F-value	Sig.	F-value	Sig	Value	Sig
bank familiarization	0.446	0.643	1.616	0.21	0.492	0.487
having own credit/debit card	0.589	0.559	2.061	0.139	1.559	0.218
use for shopping	0.16	0.853	5.223	0.009	2.71	0.106
use of card in past 1 month	0.16	0.011	1.305	0.281	6.526	0.014
no. of transactions by cards	5.007	0.037	1.512	0.232	7.319	0.01
bill payment	3.548	0.701	0.655	0.524	4.704	0.035
loan payment	0.358	0.014	0.689	0.507	4.57	0.038
withdrawal	4.666	0.115	0.904	0.412	0.007	0.933
fund transfer	2.266	0.412	1.749	0.185	9.546	0.003
e-shopping	0.905	0.062	0.572	0.568	0.735	0.396
easy to use	2.954	0.51	8.222	0.001	38.686	0
fear of loss	0.682	0.479	3.11	0.054	3.001	0.09
convenience	0.748	0.173	4.391	0.018	29.368	0
time saving	1.82	0.032	9.515	0	35.695	0
safety	3.71	0.411	5.513	0.007	33.495	0
status	0.906	0.346	6.108	0.004	14.167	0
availability	1.086	0.874	1.338	0.272	3.926	0.053
part of life	0.135	0.01	2.791	0.072	6.678	0.013
confidence	5.118	0.137	7.404	0.002	54.622	0
reliability	2.074	0.111	10.378	0	22.276	0
over purchase	2.303	0.127	6.96	0.002	10.152	0.003
select outlet	2.154	0.031	0.292	0.748	3.242	0.078
facilitator	3.74	0.109	2.381	0.103	24.374	0
good feeling	2.324	0.456	9.31	0	17.957	0
awareness	0.798	0.303	7.762	0.001	27.361	0
fear of fraud	1.227	0.235	3.112	0.054	1.06	0.309

Table 4 : Age, availability and Income

AGE	AVAILABILITY	
Under25	Mean	2.95
	N	20
	SD	0.99868
25-40	Mean	3.12
	N	25
	SD	1.20139
40-55	Mean	3
	N	5
	SD	1
Total	Mean	3.04
	N	50
	SD	1.08722

INCOME	AVAILABILITY	
lower middle	Mean	2.8333
	N	12
	SD	1.11464
middle middle	Mean	2.9667
	N	30
	SD	1.18855
middle higher	Mean	3.25
	N	8
	SD	1.38873
Total	Mean	2.98
	N	50
	SD	1.18649

The mean value of **3.12** falls under the age **25-40** age group which shows that if availability of debit cards acceptance increases then the use is most prominent under age group of 21-40 years.

As per **income group**, it shows that the **availability of outlet** is a dominating factor. It shows that **middle income group** people is highly affected by the choice of outlet. If things are available at more outlet use of card for shopping will further increase. The **mean value** of **3.25** with **standard deviation** of **1.38** shows a significant importance of the factor.

CONCLUSION

The use related patterns are quite common in both genders except certain factors that are of concern for Males and Females using Debit card as the payment tool and shopping facilitator.

Though women are considered as more shopping savvy but Debit cards as shopping facilitators have enhanced shopping of males more as compared to

their counterparts. Further, cards go on for providing confidence in transactions as this is more reliable for shopping transactions. Electronic payment gateways are more in use by the males compared to the female. This is attributed to better awareness of the male towards cards and electronic fund management.

Women have higher fear factor associated with transactions through debit card. This is mainly due to lack of awareness of various uses of a card apart from withdrawal from ATMs.

Also finding shows that the market structures is not homogenously dispersed. Metropolitan cities witness the more use of cards as payment mode by Middle-Middle Income groups than in tier II cities of the same group because of availability of outlets offering swapping machines. The use of cards can be increased among the middle income group if number of outlets offering swapping machines increases.

REFERENCES

- Carow KA, Staten M E (1999). Debit, Credit, or Cash: Survey Evidence on Gasoline Purchases, *Journal of Economics and Business*, 51, 210–224.
- Durkin TA (2000). Credit Cards: Use and Consumer Attitudes 1970–2000. *Federal Reserve Bulletin*, 86,623–634.
- Evans DS, Schmalensee R (1999). *Paying with Plastic*. Cambridge, MA: The MIT Press.
- Feinberg R A (1986). Credit Card as Spending Facilitating Stimuli: a Conditioning Interpretation, *Journal of Consumer Research*, 13, 348–356.
- Gerdes G, Walton JK (2002). The Use of Checks and Other Non-cash Payment Instruments in the United States. *Federal Reserve Bulletin*, August, 360–374.
- Greene WH (1997). *Econometric Analysis* (3rd ed.) New York, NY: Prentice Hall.
- Jonathan Zimman (2009). Debit or Credit? *Journal of Banking & Finance*, 33(2), 358-366
- Jinkook lee, Fahzy Abdul Rahman MS, Hyungsoo kim (2007) Debit Card Usage: An Examination of Its Impact on Household Debt. *Financial Service Review* 16, 73-87
- Kennickell A B, Kwast M L (1997). *Who uses electronic banking? Results from The 1995 Survey of Consumer Finance*. Annual Meetings of the Western Economic Association, Seattle, WA.
- King A S, King JT (2005). The Decision Between Debit and Credit: Finance Charges, Float, and Fear, *Financial Services Review*, 14, 21–36.
- Mann R J (2002). Credit Cards and Debit Cards in the United States and Japan, . *Monetary and Economic Studies*, 20, 123–159.
- Rook, D. W. (1987). The buying impulse. *Journal of Consumer Research*, 14, 189 –199
- Young Sik kim, Manjong Lee (2010) A model of Debit Card as a Means of Payment. *Journal of Economic Dynamics and control*, 34(8), 1359 -1368
- Zinman J (2004). *Why use debit instead of credit? Consumer choice in a trillion-dollar market*. Federal Reserve Bank of New York Staff Reports (191).
- www.rbi.org.in.