



## **Consumers' Attitude towards Usage of Debit and Credit Cards: Evidences from the Digital Economy of Pakistan**

**Jawaid Ahmed Qureshi<sup>1\*</sup>, Sana Baqai<sup>2</sup>, Muhammad Asif Qureshi<sup>3</sup>**

<sup>1</sup>Shaheed Zulfikar Ali Bhutto Institute of Science and Technology (SZABIST), Pakistan, <sup>2</sup>Shaheed Zulfikar Ali Bhutto Institute of Science and Technology (SZABIST), Pakistan. <sup>3</sup>Universiti Utara Malaysia, Malaysia. \*Email: [jawedkhanqureshi@gmail.com](mailto:jawedkhanqureshi@gmail.com)

### **ABSTRACT**

In the digital economy of Pakistan, banks and financial institutions are continuously engaged in efforts to launch new variants of plastic money. At present, the debit and credit cards are widely accepted, among other forms of plastic money, as convenient mode of payment in Pakistan. This increasing trend of debit/credit card usage is encouraging researchers to analyze the opinions of public regarding plastic card usage. This research undertaking highlights the consumer attitude towards usage of these cards in Karachi by considering demographic factors: income, education, age, and gender along with some attitudinal variables: perception of benefits and risks of plastic money. The data is gleaned through survey from the sample of 372 respondents of Karachi. The results reveal that monthly household income, education, and age do not have any significant impact on the plastic card usage. Moreover, the findings uncover that males are using plastic cards more frequently than females. The inquiry confirmed that debit cards' usage is more than that of credit cards' usage. Moreover, the perceived benefits and risks play a significant role in usage of debit and credit cards.

**Keywords:** Consumer Attitude, Debit/Credit Cards, Plastic Card Usage, Marketing of Financial Products

**JEL Classifications:** D12, D53, G2

### **1. INTRODUCTION**

Banks are the financial institutions play a very crucial role in economic growth and development of a country. The banks' facilitation in trade, industrial development, agricultural development, capital formation, credit creation, production, transfer of money, investment, saving, and their financial advising services flourish the economic prosperity of country. Sound and efficient payment systems through banks contribute towards smooth functioning of financial market. Banks, therefore, try to bring in new forms of payments to make the payment system more secure and efficient. The introduction of plastic money is one of the best examples of such innovative efforts by banks. Plastic money is a modern and convenient method for payments and doing transactions. This shift to digital payment system is important in many dimensions, like it is faster and cheaper to process, and there is less risk of crime. It is a kind of ready money that reduces the risk of managing vast amount of cash. Debit cards, credit cards, automatic teller machines (ATM) cards, smart cards, etc. all fall in plastic money.

#### **1.1. Plastic Money in Pakistan**

Worldwide as well as in Pakistan, plastic money business is nourishing very briskly, and it appears a very facilitating form of using money. Over the past decade, the Pakistani banking industry is undergoing a critical change from paper money to plastic money. The future of this industry is progressing towards severe competition due to globalization, more access to information, advanced technology, and increased awareness of general public. From past several years, electronic banking is having a major influence on the banking industry; as the amount and the number of transactions is showing a considerable growth pattern in Pakistan. ATM card enables a cardholder to withdraw money by entering a personal identification number into ATM. It is used for electronic commerce and for banking transactions, with an added feature of bearing the name of cardholder. Deposit holders of any bank can get ATM debit cards. A debit card is issued by banks to enable its customers to withdraw money in order to pay for goods and services. Through this, clients do not need to go to banks to withdraw cash; instead one can do it electronically. Money is drawn directly from the deposit account of client at

the time of purchase. Moreover, it can be used to pay bills for shopping, hoteling, gasoline fueling, and utility bills. Nowadays, banks are issuing ATM debit cards that possess features of both ATM and debit cards. A credit card can also be used for paying shopping bills, hotel bills, fuel filling bills, etc. by swiping the card in a machine and entering the transacted amount. After the transaction is done, a copy of invoice is given to the customer as well as retained by the concerned retailer after getting signature from him/her. A customer can only use the credit card up to certain credit limit assigned to him/her.

Thousands of ATMs are installed in entire Pakistan which observed impressive growth over the period of time due to issuance of plastic cards (debit cards, credit cards, ATM cards, smart cards and Islamic cards) to millions of users. Since the launching of debit and credit cards, the banking sector witnessed an unprecedented, remarkable, and multifold growth due to consumers' endorsement of these cards and their associated benefits despite considering their risk factors too. Debit cards recorded the highest market share amongst all other plastic cards and their transactions have also been incremental in terms of both volume and value, whereas credit cards have shown slow growth as well as declining patterns over the period of time (State Bank of Pakistan, 2013; 2016; 2018).

### 1.2. Problem, Purpose, Significance, and Justification

At present, plastic money is like a buzz word; it has become the convenient mode of payment for every user. Even though, in the developing country like Pakistan, the consumer base of plastic cardholders seems to be increasing. In Pakistan, 20.72 million plastic cards were issued up to December 2012, which recorded further growth in years ahead (State Bank of Pakistan, 2013; 2016; 2018). This statistic exhibits a tremendous growth of plastic card users within short period of time. However, as per the authors' search, there was no single scholarly paper published in the domestic context simultaneously on both debit and credit cards, while there appear very few studies on credit cards only, which substantiate a research gap. Therefore, the purpose of this inquiry is to discover the major trends about the usage of debit/credit cards and to examine the effect of demographic factors (income, education, age, and gender/sex), the frequency of cards' use, and consumer perceptions of benefits and risks on consumer attitude towards usage of debit/credit cards. Hence, it is likely to be fruitful for bankers and bank marketers, policy makers, consumers (or general public), and academia.

## 2. LITERATURE REVIEW

Ample of literature has been written on the shift of payment systems from paper money to plastic money. Stango and Zinman (2009) conducted a study in USA and found that millions of people are using debit and credit cards for shopping and payments. These new forms of money have enhanced their liquidity and capacity to buy things, nurtured accelerated consumption patterns, and such trends have consolidated many industries and overall economy. Enormous success of such cards and plastic money has been noticed worldwide including under-developed countries. Several authors investigated the various dimensions of liquidity and consumption patterns through plastic money, the price structure,

interest rates, the contract between a consumer and a bank, consumer behavior and attitude towards such liquidity, and the pertinent financial regulations (Carroll, 2001; DellaVigna and Malmendier, 2004; Gabaix and Laibson, 2006; Gross and Souleles, 2002; Stango and Zinman, 2009). These authors recognized the ever-escalating salience of plastic money particularly debit and credit cards; since the advent of such cards revolutionized the shopping markets and retail banking as in USA and worldwide as people make transactions of billions of dollars via such cards.

In Singapore, Gan and Maysami (2006) found that credit card selection is based on convenience, economic, and protection. On the other hand, factors like reputation of the card and travel convenience were less important in credit card selection. By analyzing the demographic factors, the researchers found that the people with high income and better education pay less attention to economic-promotional factors while choosing the credit card. Older and married people give more weightage to convenience-protection, while Singaporean females give more value to promotion and males give value to economic factor.

Undoubtedly, if credit cards are compared to debit cards, then studies have shown that there are some perceived barriers that create hindrances in the adoption of credit cards far and wide. Khalid et al. (2013) conducted a survey from 150 customers including both credit card holders and non-credit card holders in Pakistan. The T-test results showed that some demographic factors: income, education, and age, gender, and perceptions regarding annual fees and high interest rates, and lack of awareness had significant influence on the usage of credit cards. Hence, it is hypothesized that:

- H1: There is an impact of income level of individuals on consumer attitude towards usage of debit/credit cards.
- H2: There is an impact of education level of individuals on consumer attitude towards usage of debit/credit cards.
- H3: There is an impact of age of individuals on consumer attitude towards usage of debit/credit cards.
- H4: There is an impact of gender of individuals on consumer attitude towards usage of debit/credit cards.

In an effort of providing enhanced facilities to public, banks are introducing various other forms of plastic money like smart card. Al-Alawi and Al-Amer (2006) highlighted the work history to features and major benefits of smart cards by collecting 513 responses through questionnaires from university students of Bahrain, and found that 88% of respondents want to replace their existing cards with smart cards.

Additionally, some other researchers examined the effect of demographic variables on the adoption of alternative payment options. Borzekowski et al. (2006) analyzed data from 800 individuals, and found that debit card usage is decreased with age and increased with education. They uncovered that individuals have a tendency to increase the usage of debit cards when they expect financial stress in their near future. Moreover, the usage is more common in women than men. Hence, it is hypothesized that:

- H5: The frequency usage of debit cards is greater than that of usage of credit cards.

Padaruth et al. (2013) conducted a research in Mauritius and concluded that customers found plastic cards as an effective mode of payment, and also they are worldwide accepted. Other reasons for using plastic cards included: security, convenience, and time saving, as compared to cash payments. The results also revealed that plastic cards' innovative features, consumer's lifestyle and status also contribute toward the usage of plastic cards. The preference for usage of plastic cards varies according to the need and perceived benefits of individuals. Durkin (2000) inferred the credit card usage by interviewing almost 500 households in USA, and found that most of the people were using credit cards as source of payment and revolving credit. They liked the feature of convenience with the added benefit of open-ended credit lines. Banks also play a major role towards gaining the attention of customers for increasing the use of credit cards and other plastic cards by offering various schemes, such as discount deals on shopping, eating out at restaurants, buying kitchen appliances, mobile phones, etc. and other benefits. Simon et al. (2008) used the data of a research conducted by a private research company, Roy Morgan Research and found that engagement in a loyalty program increases the chances of using credit cards by 21%, and access to interest-free period increases the usage by 15%. Hence, it is hypothesized that:

- H6: There is an impact of perception of benefits on consumer attitude towards usage of debit/credit cards.

People nowadays have become conscious about the choice of payment method due to increased awareness and information. Kosse (2010) collected responses from 1672 Dutch customers through questionnaires about payment behavior at points of sale (POS), the safety of POS payment instruments, the impact of personal experiences and personal characteristics, and the impact of safety perception on payment behavior. It was observed that cash and debit card are the main payment instruments used at the counter. The results revealed that consumers' assessment about the likelihood and consequences of payment incidents strongly affect the consumers' safety perception; the higher the perceived negative impact, the less secure they feel.

Several studies have also kept their focus on the consumer choice of using debit cards as compared to other payment methods. King and King (2005) analyzed the reasons that why consumers use debit cards over credit cards, and concluded that one of the reasons is fear of falling in debt on credit card, while the other reason is that, consumers have a bad credit history. The inquiry also revealed that demographic factor like age is an important factor in selection of mode of payment, because younger households (like millennials) are more willing to adopt the new technology. Working on the factor of household debt, Lee et al. (2007) deliberated about debit card usage and its impact on household debts by using simultaneous equation modeling on the data taken from Survey of Consumer Finances, 2004. The results indicated that debit card usage is negatively associated with household debt. Additionally, household composition, timesaving horizon, attitude toward credit, credit history, education, and income were the significant independent variables relating to household debt, whereas, age and credit card proved as insignificant variables.

A study conducted about the economics of plastic money including debit and credit cards concluded that price of such cards has serious effect on their demand and sales volume (Scholnick et al., 2008). Another study conducted in Austria about the comparative analysis of debit versus credit cards usage measured their impact on customer satisfaction and loyalty. It concluded that the choice of a particular card or payment method depends on the user's personal characteristics, expectations, and desired performance of the service providers (Foscht et al., 2010). Zinman (2009) conducted a study on debit and credit cards and explicated the salient factors including time and hassle cost concerns, security concerns, bankruptcy concerns, and reward concerns or motives.

Some authors conducted studies in the realm of Islamic credit cards and ascertained about Shariah (i.e., Islamic) compliant perspective that advocates non-interest bearing financial products (Ali et al., 2017; Kahf and Mohamed, 2016). Ali et al. (2017) investigated about the key pertinent variables as subjective norms, attitudes, and financial cost in nexus with a renowned theory of consumer behavior, theory of reasoned action (TRA) that underpins the relationship of attitude, subjective norms, expectations, and behavior as the basis of making rationale choices toward usage of Islamic credit cards.

Along with developed countries, developing countries are also moving towards this dynamic shift of paperless mode of payment. Subhani et al. (2011) investigated the hypothesis on plastic money/credit card charisma, and the impact of usability and affordability of Plastic Money/Credit card, on its preference to use, from the sample of 2000 respondents from Pakistan, India, Bangladesh, and Srilanka (500 from each nation). The average score of all outlined variables was measured for each nation and then the preference to use plastic money/credit card is regressed by the plastic money/credit card charisma, and its usability and affordability by using multiple linear regressions via split technique. The findings revealed that the average scores were the highest for Pakistan. Though it is a question of matter that in Pakistani banking sector, there is ample variety of cards; national and international cards issued by different banks; nevertheless, there is stiff competition among various banks. Therefore, individual banks have to rely on improved customer service to better maintain the customer attention. Butt et al. (2010) collected data about the selection criteria of credit cards from 800 cardholders and found that factors like convenience, economical use, and sense of security (i.e., the risk factor) appear significant from customers' considerations in selecting a credit card in Pakistan. The other risks of using debit/credit cards include (likelihood of) increase in spending pattern, perception of annual fees, high interest rates, lack of awareness, and protection or security (for instance, fear of losing PIN code or technical problems) to personal bankruptcy (Butt et al., 2010; Khalid et al., 2013). Hence, it is hypothesized that:

- H7: There is an impact of perception of risks on consumer attitude towards usage of debit/credit cards.

The Figure 1 focuses on assessing the relationship of demographic variables with consumer attitude towards usage

of credit/debit cards. The demographic variables taken under consideration consist of: Income, Education, Age, and Gender, which are taken as categorical variables but not as moderating variables, since they were tested through frequency of usage scale. The perception of benefits and perception of risks were also examined with consumer attitude towards usage of credit/debit cards.

### 3. RESEARCH METHODOLOGY

The research design includes positivism philosophy, deductive approach, and a quantitative survey to address the research problem and objectives. It employs descriptive research design because analyzing attitudes of consumers towards usage of debit and credit cards demands a quite extensive and wide research (Bashir et al., 2017). The periodic cum secondary data regarding the number of debit and credit cards in Pakistan is extracted from State Bank of Pakistan sources, whereas for primary data collection, a questionnaire survey is undertaken. The population of Karachi is estimated to be more than 18 million people (World Population Review, 2018). The samples/participants contained people from both genders including males and females with diverse occupations including students cum working professionals, businessmen, and professionals across various age brackets. Since the population is scattered, convenience sampling method is used. Out of 400 questionnaires distributed, 372 forms appear useful for data analysis of this study. Pre-testing of questionnaire was done on 20 questionnaires, which were excluded from aggregate analysis. Cross-tabulation contains frequencies and percentages to analyze nominal variables. Chi-square test is used to analyze nominal/categorical variables and T-test is applied to determine the significance of selected variables (measured on interval scale) on attitude of consumers towards usage of debit/credit cards (Cooper and Schindler, 2013; Malhotra, 2007; Zikmund et al., 2013).

Figure 1: Conceptual framework

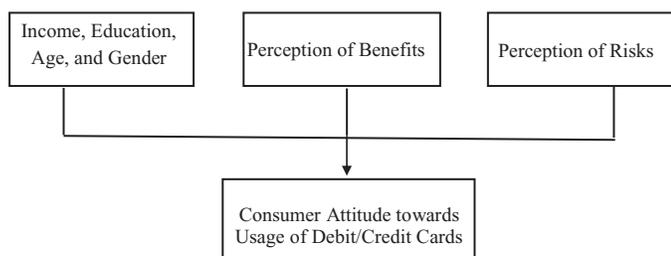


Table 1: Number of card holders in Pakistan (000)

FY 01	FY 02	FY 03	FY 04	FY 05	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15
415	736	1257	1874	4257	4999	5800	6730	8900	10520	14235	17950	22317	25353	25675

Source: Annual Reports - State Bank of Pakistan (2016). FY: Fiscal year

Table 2: Number of credit and debit card holders in Pakistan (000)

Description	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15
Credit card holders (000)	1512	1698	1777	1664	1613	1385	1231	1088	1334	1319
Debit card holders (000)	3788	3983	4905	6395	8140	11990	15984	20267	23061	23403

Source: Annual reports - State Bank of Pakistan (2016)

### 4. DATA ANALYSIS AND FINDINGS

#### 4.1. Reliability and Validity Concerns

The Cronbach's alpha values for the entire variables stand between the ranges of (0.711 to 0.751) that imply that the scale is reliable. Moreover, factors were carefully selected from the extant literature and the findings are compared with those of the similar findings to ensure reliability and validity.

#### 4.2. Growth Patterns of Debit and Credit Cards Usage in Pakistan

The Table 1 depicts the growth trends of plastic card holders in Pakistan from fiscal year (FY) 2001 to 2015. This trend includes aggregate number of card holders owning debit and/or credit cards.

Figure 2 portrays an upward trend in plastic money usage. It indicates that the number of card holders has been increasing year by year in Pakistan. This is a positive signal that plastic money is becoming more common and widely accepted in the country. The total number of cards increased from 415,000 in FY 2001 to 10,520,000 in 2010, and 25,675,000 by the end of 2015, which reflects unprecedented and stupendous growth.

#### 4.3. Debit and Credit Card Holders in Pakistan

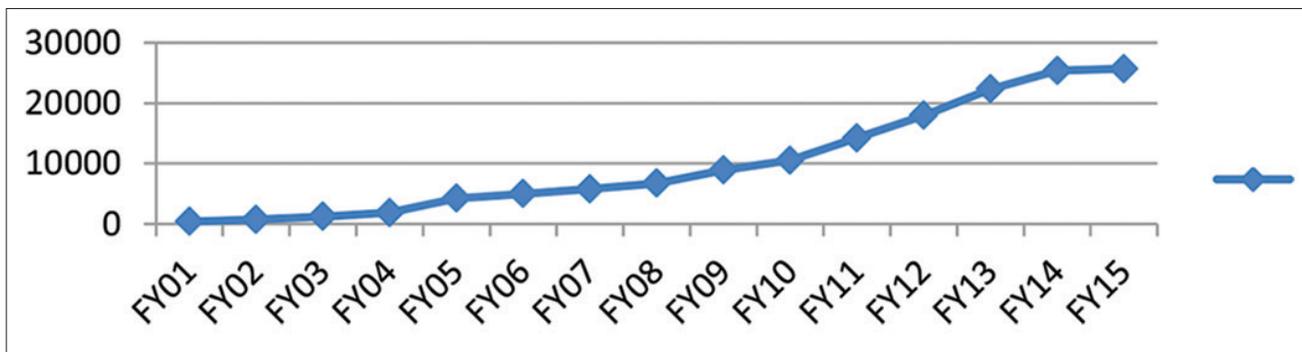
The Table 2 segregates the debit and credit card holders from FY 2006 to FY 2013. This data is used to compare the population of debit card holders with that of credit card holders.

The Figure 3 presents the trends of debit versus credit cards. It reflects that the number of debit card holders is increasing in Pakistan, while that of credit card is declining. It means that attitude of Pakistanis is positive regarding debit card usage. On the other hand, the decreasing slope of number of credit card holders directs that the credit card market of Pakistan does not possess much potential due to the risks consumers associate with it. The total number of credit card holders slightly increased from 1,512,000 in FY 2006 to 1,613,000 in 2010, and then decreased to 1,319,000 by the end of 2015. The total number of debit card holders increased from 3,788,000 in FY 2006 to 8,140,000 in 2010, and 23,403,000 by the end of 2015. These trends reflect incredible growth patterns and flourishing digital economy. In addition, the trends portray that in terms of growth, debit cards outperformed that credit cards.

#### 4.4. Impact of Income-level on Debit/Credit Cards Usage

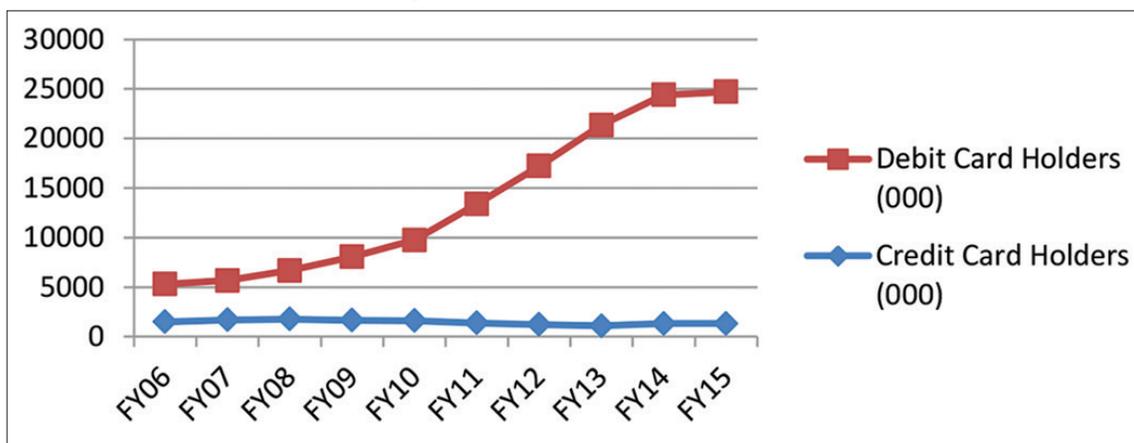
The Table 3 contains the debit and credit cards usage frequency in terms of income (that reflects social class as well on the basis of

Figure 2: Number of card holders (000)



Source: Annual reports - State Bank of Pakistan (2016)

Figure 3: Debit and credit card holders



Source: Annual reports - State Bank of Pakistan (2016)

Table 3: Usage frequency (of both cards) and monthly household income (cross tabulation)

Description	Monthly household income						Total
	Below 15,000	15,001–30,000	30,001–45,000	45,001–60,000	60,001–75,000	Above 75,000	
Frequency usage							
Less than once							
Count	10	18	14	6	26	40	114
% of total	2.7	4.8	3.8	1.6	7.0	10.8	30.6
1-3 times							
Count	4	28	14	22	26	34	128
% of total	1.1	7.5	3.8	5.9	7.0	9.1	34.4
4-6 times							
Count	2	10	12	16	14	12	66
% of total	0.5	2.7	3.2	4.3	3.8	3.2	17.7
More than 6 times							
Count	2	8	10	10	12	22	64
% of total	0.5	2.2	2.7	2.7	3.2	5.9	17.2
Total							
Count	18	64	50	54	78	108	372
% of total	4.8	17.2	13.4	14.5	21.0	29.0	100.0

monthly income). The results uncover that most of the respondents lie in the range of above PKR. 75000 income bracket and their majority use these plastic cards for less than once per month.

Hypothesis # 01 was: There is an impact of income level of individuals on consumer attitude towards usage of debit/credit cards. It is tested by using the Chi-Square test and the significance of result is stated in Table 4. This proves that income does not

Table 4: Chi-Square test: Usage frequency (of debit and credit cards) and monthly household income

Description	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-square	12.834	15	0.615

have any significant impact on plastic card usage; therefore it is not necessary that persons having more income will use the plastic cards more frequently.

**Table 5: Usage frequency (of both cards) and education (cross tabulation)**

Description	Education				Total
	Intermediate (A-level)	Bachelors	Masters	Others	
Frequency usage					
Less than once					
Count	6	66	36	6	114
% of total	1.6	17.7	9.7	1.6	30.6
1-3 times					
Count	6	44	76	2	128
% of total	1.6	11.8	20.4	0.5	34.4
4-6 times					
Count	2	22	42	0	66
% of total	0.5	5.9	11.3	0.0	17.7
More than 6 times					
Count	0	22	42	0	64
% of total	0.0	5.9	11.3	0.0	17.2
Total					
Count	14	154	196	8	372
% of total	3.8	41.4	52.7	2.2	100.0

#### 4.5. Impact of Education on Debit/Credit Cards Usage

This objective is measured by doing cross-tabulation analysis on education with frequency usage of debit cards and credit cards simultaneously. The Table 5 determines that these cards are mostly used by respondents having masters-level education. Nevertheless, the highest frequency of cards' usage tends to be 1-3 times per month.

Hypothesis # 02 was: There is an impact of education level of individuals on attitude towards usage of debit/credit cards. It was tested via Chi-Square test in Table 6 exhibited that there is no significant impact of education and frequency of usage of both debit and credit cards (on monthly basis).

#### 4.6. Impact of Age on Debit/Credit Cards Usage

This objective is measured by doing cross-tabulation analysis on age with frequency usage of the both cards: debit cards and credit cards simultaneously. Table 7 determines that plastic cards are mostly used by respondents having age bracket of 31-36. One limitation of sampling here is that the majority of the participants fall in this age bracket.

Hypothesis # 03 was: There is an impact of age of individuals on attitude towards usage of debit/credit cards. The results revealed through Chi-Square test in Table 8 exhibited that there is no significant impact of age of individuals on frequency of debit and credit card usage per month.

#### 4.7. Impact of Gender on Debit/Credit Cards Usage

This objective is measured by doing cross-tabulation analysis on gender with frequency usage of the both cards: debit cards and credit cards simultaneously. Table 9 determines that plastic cards are mostly used by respondents of the both genders: males and females (whereas due to cultural restrictions, any other genders are not taken as samples).

Hypothesis # 04 was: There is an impact of gender of individuals on attitude towards usage of debit/credit cards (i.e. such cards' usage by males is greater than that of females). The results

**Table 6: Chi-square test: Usage frequency (of debit and credit cards) and education**

Description	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-square	12.289	9	0.198

revealed through Chi-Square test in Table 10 exhibited that there is no significant impact of gender of individuals on frequency of debit and credit card usage per month. However the results are significant at 10% significance level, indicating that males' fraction is relatively higher than females in plastic cards' per month usage frequency intervals.

#### 4.8. Frequency of Usage of Debit versus Credit Cards

The Table 11 presented beneath highlights the usage ratio of debit and credit cards. It displays that 61.8% of sample uses debit card only, while 15.1% uses credit card only. However, only 23.1% are the respondents who own both debit and credit cards. This reflects that debit cards are more common than credit cards.

This objective is also measured by doing cross-tabulation analysis on plastic card type. The Tables 12 and 13 reckons that the use of debit cards is greater than that of credit cards. The results portray that most of the respondents (i.e., 74.7%) use credit cards only less than once in a month. This demonstrates that either they use credit card occasionally or they do not use credit card at all. However, for debit cards, most of the respondents (i.e., 34.4%) have pointed to 1-3 times usage frequency per month.

Hypothesis # 05 was: The usage frequency of debit cards is greater than that of credit cards. The results revealed through Chi-Square test in Table 14 confirm that frequency of debit card usage is significantly higher than that of credit card.

Hypothesis # 06 was: There is an impact of perception of benefits on consumer attitude towards usage of debit/credit cards.

Hypothesis # 07 was: There is an impact of perception of risks on consumer attitude towards usage of debit/credit cards.

**Table 7: Usage frequency (of both cards) and age (cross tabulation)**

Description	Age				Total
	18-23 years	24-30 years	31-36 years	37 years+	
Frequency usage					
Less than once					
Count	10	106	158	4	278
% of total	2.7	28.5	42.5	1.1	74.7
1-3 times					
Count	0	36	18	4	58
% of total	0.0	9.7	4.8	0.5	15.1
4-6 times					
Count	4	10	6	2	22
% of total	1.1	2.7	1.6	0.5	5.9
More than 6 times					
Count	0	2	14	0	16
% of total	0.0	0.5	3.8	0.0	4.3
Total					
Count	14	154	196	8	372
% of total	3.8	41.4	52.7	2.2	100.0

**Table 8: Chi-square test: Usage frequency (of debit and credit cards) and age**

Description	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-square	11.026	9	0.274

**Table 9: Usage frequency (of both cards) and gender (cross tabulation)**

Description	Frequency usage (both cards)				Total
	Less than once	1-3 times	4-6 times	More than 6 times	
Gender					
Male					
Count	24	110	46	10	190
% within gender	12.6	57.9	24.2	5.3	100.0
% of total	6.5	29.6	12.4	2.7	51.1
Female					
Count	38	116	26	2	182
% within gender	20.9	63.7	14.3	1.1	100.0
% of total	10.2	31.2	7.0	0.5	48.9
Total					
Count	62	226	72	12	372
% within gender	16.7	60.8	19.4	3.2	100.0
% of total	16.7	60.8	19.4	3.2	100.0

**Table 10: Chi-square test: Usage frequency (of both cards) and gender**

Description	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-square	7.022	3	0.071

**Table 11: Plastic card type**

Description	Frequency	Percent	Valid percent	Cumulative percent
Valid				
debit card	230	61.8	61.8	61.8
credit card	56	15.1	15.1	76.9
Both	86	23.1	23.1	100.0
Total	372	100.0	100.0	

**4.9. Perception of Benefits and Risks of Debit/Credit Cards' Usage**

In Table 15, T-test analysis is executed to know the significance of variable of average benefits and average risks. The average perception of benefits variable is computed by taking the

average of benefits considered in this study, which comprise: convenience (in carrying), safety, ease of use, time saving, and alleviation of cash shortage. Similarly, the average perception of risks variable is computed by taking the average of risks, which are: (likelihood of) increase in spending pattern, fear of losing PIN code, technical problems, financial charges, and personal bankruptcy. The findings discover that the perceived benefits and perceived risks fall highly significant variables in this research. This directs that perception of benefits and perception of risks appear significant variables for consumer attitude towards usage of debit/credit cards.

**5. DISCUSSION AND CONCLUSION**

Keeping in view the stupendous growth and potential of debit and credit cards in Pakistan and absence of published scholarly paper in the domestic matrix (as per authors' search, there exist very few studies in the domestic context but only on credit cards), this probe was undertaken. The purpose of this inquiry was to discover the major trends about the usage of debit/credit cards and

**Table 12: Usage frequency of debit card and credit card (cross tabulation)**

Frequency usage (debit)	Frequency usage (credit)				Total
	Less than once	1-3 times	4-6 times	More than 6 times	
Less than once					
Count	62	44	6	2	114
% of total	16.7	11.8	1.6	0.5	30.6
1-3 Times					
Count	116	4	6	2	128
% of total	31.2	1.1	1.6	0.5	34.4
4-6 Times					
Count	56	6	4	0	66
% of total	15.1	1.6	1.1	0.0	17.7
More than 6 times					
Count	44	2	6	12	64
% of total	11.8	0.5	1.6	3.2	17.2
Total					
Count	276	56	22	16	372
% of total	74.7	15.1	5.9	4.3	100.0

**Table 13: Usage frequency of debit card and credit card (cross tabulation)**

Type of card	Less than once	1-3 times	4-6 times	More than 6 times	Total
Debit card	114 i.e., 30.6%	128 i.e., 34.4%	66 i.e., 17.7%	64 i.e., 17.2%	372 i.e., 100%
Credit card	278 i.e., 74.7%	56 i.e., 15.1%	22 i.e., 5.9%	16 i.e., 4.3%	372 i.e., 100%

**Table 14: Chi-Square Test: Usage Frequency of Debit and Credit Cards**

Description	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-square	56.547	9	0.000

**Table 15: One-sample test**

Description	Test value=0					
	t	df	Sig. (2-tailed)	Mean difference	95% confidence interval of the difference	
					Lower	Upper
Perception of benefits	76.606	371	0.000	3.914	3.81	4.01
Perception of risks	67.683	371	0.000	3.437	3.34	3.54

to examine the effect of demographic factors (income, education, age, and gender/sex), the frequency of cards' use by gender (male versus female), and consumer perceptions of benefits and risks on consumer attitude towards usage of debit/credit cards usage. The method of inquiry included: a survey from 372 participants containing students cum working professionals, businessmen, and professional males and females. Chi-square test was used to analyze categorical variables and T-test was applied to check significance level of selected variables (measured on interval scale) on attitude of consumers towards usage of debit/credit cards.

This probe uncovered that the trends of debit cards usage have been increasing magnificently over a period of one and half decade (i.e., since 2001 to 2015), whereas credit card usage has been slowly inclining and sometimes declining. It highlighted that the pertinent demographic variables including income, education, age, and gender do not have any significant impact on consumer attitude towards usage of debit/credit cards usage. These results appear inconsistent with an analogous study in the context of Pakistan by Khalid et al. (2013), but it focused on credit cards only and had a relatively limited sample size. This

study found that majority of the population is using debit cards as compared to credit cards. These results appear consistent with the findings of King et al. (2005) and Borzekowski et al. (2006). Whereas debit and credit cards are more frequently used by males than females. These results appear inconsistent with the findings of Borzekowski et al. (2006), which means the trends and practices in Pakistan differ than that of United States. However, consumers have significant perception of benefits of debit/credit cards, like convenience, ease of use, time saving, and alleviation of cash shortage. These results appear consistent with the findings of Padaruth et al. (2013) and Simon et al. (2008). At the same time, they have significant perception about risks of debit/credit cards, like (likelihood of) increase in spending pattern, perception of annual fees, high interest rates, lack of awareness, and protection or security (for instance, fear of losing PIN code or technical problems) to personal bankruptcy. These results appear consistent with the findings of Butt et al. (2010); Khalid et al. (2013); and Kosse (2010). Therefore, it can be concluded that attitudinal variables like perceptions regarding benefits and risks are more influential than demographic factors in determining the debit/credit cards usage.

## 6. RECOMMENDATIONS/IMPLICATIONS, CAVEATS, AND AREAS OF FURTHER STUDIES

Keeping in view, the overall analysis and results, it is suggested that banks should be more proactive and innovative in their offerings, so that the customers may feel more comfortable and secure in the usage of plastic money. Despite of the continuous annual increment in plastic card users, there still exists much potential in Pakistani market to be utilized by banks. For this reason, banks have to make the endeavors to enhance the acceptability of their cards, and most importantly, they have to make their existing and potential customers aware that how beneficial and essential are the features of plastic cards for them.

This is a small scale study in one mega metro city, whereas there are also some directions for future researches. First, a similar study can be performed on a larger sample size, chosen through random sampling technique in order to have more authenticated results that can be generalized to overall population. Secondly, other researches can be conducted in other areas of Pakistan, where plastic money is used extensively or areas where its usage is not prevalent, such as far flung rural territories and to discover various attitudes and perceptions of diverse public or consumers regarding debit/credit cards. Thirdly, this enquiry has centered on usage of debit and credit cards only, but not on the smart card or other electronic transactions like internet banking, mobile banking, and online transactions, which tend to be its delimitation. Therefore, additional variables and factors might be selected and ascertained in future.

## REFERENCES

- Al-Alawi, A.I., Al-Amer, M.A. (2006), Young generation attitudes and awareness towards the implementation of smart card in Bahrain: An exploratory study. *Journal of Computer Science*, 2(5), 441-446.
- Ali, M., Raza, S.A., Puah, C.H. (2017), Factors affecting to select Islamic credit cards in Pakistan: the TRA model. *Journal of Islamic Marketing*, 8(3), 330-344.
- Bashir, S., Syed, S., Qureshi, J.A. (2017), Philosophical and methodological aspects of mixed-methods research: A review of the academic literature. *Journal of Independent Studies and Research*, 15(1), 32-50.
- Borzekowski, R., Elizabeth, K.K., Shaista, A. (2008), Consumers' use of debit cards: Patterns, preferences, and price response. *Journal of Money, Credit and Banking*, 40(1), 149-172.
- Butt, B.Z., Rehman, K.U., Saif, M.I., Safwan, N. (2010), Customers' credit card selection criteria in perspective of an emerging market. *African Journal of Business Management*, 4(13), 2934-2940.
- Carroll, C.D. (2001), A theory of the consumption function, with and without liquidity constraints. *Journal of Economic Perspectives*, 15(3), 23-45.
- Cooper, D.R., Schindler, P.S. (2013), *Business Research Methods*. 12<sup>th</sup> ed. New York, USA: McGraw-Hill Education.
- DellaVigna, S., Malmendier, U. (2004), Contract design and self-control: Theory and evidence. *The Quarterly Journal of Economics*, 119(2), 353-402.
- Durkin, T.A. (2000), Credit cards: use and consumer attitudes, 1970-2000. *Federal Reserve Bulletin*, 86, 623-634.
- Gan, L.L., Maysami, R.C. (2006), *Credit Card Selection Criteria: Singapore Perspective (No. 0610)*. Singapore: Nanyang Technological University, School of Social Sciences, Economic Growth Centre.
- Gabaix, X., Laibson, D. (2006), Shrouded attributes, consumer myopia, and information suppression in competitive markets. *The Quarterly Journal of Economics*, 121(2), 505-540.
- Gross, D.B., Souleles, N.S. (2002), Do liquidity constraints and interest rates matter for consumer behavior? Evidence from credit card data. *The Quarterly Journal of Economics*, 117(1), 149-185.
- Foscht, T., Maloles C. 3<sup>rd</sup>, Swoboda, B., Chia, S.L. (2010), Debit and credit card usage and satisfaction: who uses which and why—evidence from Austria. *International Journal of Bank Marketing*, 28(2), 150-165.
- Kahf, M., Mohamed, A. (2016), Credit cards: Contemporary issues from economic and Shariah perspective. *Journal of King Abdulaziz University: Islamic Economics*, 29(1), 57-80.
- Khalid, J., Butt, H.S., Murtaza, M., Khizar, U. (2013), Perceived barriers in the adoption and usage of credit cards in Pakistan banking industry. *International Review of Management and Business Research*, 2(1), 104-116.
- King, A.S., King, J.T. (2005), The decision between debit and credit: finance charges, float, and fear. *Financial Services Review*, 14(1), 21-36.
- Kosse, A. (2010), *The Safety of Cash and Debit Cards: A Study on the Perception and Behavior of Dutch Consumers*. DNB Working Paper, 245. Amsterdam: De Nederlandsche Bank.
- Lee, J., Abdul-Rahman, F., Kim, H. (2007), Debit card usage: An examination of its impact on household debt. *Financial Services Review*, 16(1), 73-87.
- Malhotra, N.K. (2007), *Marketing Research – An Applied Orientation*. 5<sup>th</sup> ed. New Delhi, India: Pearson Education Inc.
- Padaruth, S., Juwaheer, T.D., Madoo, V. (2013), Mapping the hidden construct towards the adoption of plastic cards in Mauritius. *International Journal of Advanced Research*, 1(4), 340-355.
- Scholnick, B., Massoud, N., Saunders, A., Carbo-Valverde, S., Rodríguez-Fernández, F. (2008), The economics of credit cards, debit cards and ATMs: A survey and some new evidence. *Journal of Banking and Finance*, 32(8), 1468-1483.
- Simon, J., Smith, K., West, T. (2008), *Price Incentives and Consumer Payment Patterns*. Reserve Bank of Australia, Payments Policy Department. Working Paper.
- Stango, V., Zinman, J. (2009), What do consumers really pay on their checking and credit card accounts? Explicit, implicit, and avoidable costs. *American Economic Review*, 99(2), 424-29.
- State Bank of Pakistan. (2013), *Payment Systems Review*. State Bank of Pakistan.
- State Bank of Pakistan. (2016), *Annual Report*. State Bank of Pakistan.
- State Bank of Pakistan. (2018), *Annual Report*. State Bank of Pakistan.
- Subhani, M.I., Hasan, S.A., Osman, A., Nayaz, M. (2011), plastic money/ credit cards charisma for now and then (A thin line between easy money and risky money). *European Journal of Scientific Research*, 62(1), 123-127.
- World Population Review. (2018), *Population of Karachi*. Available from: <http://worldpopulationreview.com/world-cities/karachi-population/>.
- Zikmund, W.G., Babin, B.J., Carr, J.C., Griffin, M. (2013), *Business Research Methods*. South-Western: Cengage Learning.
- Zinman, J. (2009), Debit or credit? *Journal of Banking and Finance*, 33(2), 358-366.